Myakka River Basin Project Final Progress Report

October, November, December, 1989

Contract Number CM222

Submitted to:

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Twin Towers Office Building
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Submitted by:

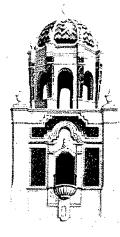
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Funds for this project are provided by the Florida Department of Environmental Regulation, Office of Coastal Management, using funds made available through the National Oceanic and Atmospheric Administration under the Coastal Zone Management Act of 1972, as amended.

February 28, 1990

Date

leffrey L. Lincer, Ph.D.



COUNTY OF SARASOTA FLORIDA

Office of the Scientific Advisor Ecological Monitoring

1301 Cattlemen Road Sarasota, Florida 34232 Jeffrey L.Lincer, Ph.D., Director Telephone (813) 378-6142

February 27, 1990

Mr. Jim Stoutamire
Florida Department of Environmental Regulation
Coastal Zone Management
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Dear Jim:

Enclosed is the final progress report for DER contract No. CM222. This report summarizes the accomplishments of the project from October to December 1989 and includes an executive summary.

If you should have any questions, please let me know.

Sincerely

Jeffrey L. Lincer, Ph.D.,

Director,

Ecological Monitoring Division

enclosures:

Final Progress Report (8 copies)
Executive Summary (8 copies)

cc:

MRBP -- Progress Report file Fred Calder, Department of Environmental Regulation Gwenn Godfrey, Department of Environmental Regulation Barbara Hartley, Clerk to the Board

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Sarasota County Staff

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Myakka River Basin Project Year 1

Executive Summary

This summary is being provided pursuant to DER Contract No. CM222, Section 6C. It includes a brief summary of work conducted and results obtained during Year 1 of the project.

Year 1 of the Myakka River Basin Project assembled and compiled the history of the Myakka River, provided new data to assess the present status of the watershed, and initiated a vision of the system's future. The history of the Myakka River depicted an area used primarily for agriculture. The earliest disturbances to the river system were agricultural. Installation of control structures assured ranchers that their livestock would have water all year; they would have more arable land; or that the periodic flooding of the river could be controlled. Some of these people have assumed a strong stewardship role. Many of the families who have lived along the Myakka River for years have land deeds that grant them ownership of the river as well as the land surrounding it. These people are very dubious about Florida's ownership of submerged lands, and suspicious of any effort that might infringe on their rights to control the river.

A look at the present status of the river basin shows a new set of problems emerging for the Myakka. First among these is development. As the population of Florida continues to grow very rapidly. Predictions for the next ten years put Florida's population explosion second only to California's. Southwest Florida is predicted to experience the most rapid growth in Florida during that same time. There are currently five subdivisions in the permit review process that have "Myakka" as part of their name. The potential and/or real consequences of development include loss of habitat, alteration of shorelines, increases in nonpoint source pollution due to stormwater runoff and increased septic tank use, and shortages of potable water.

During the past year, the City of Sarasota has installed a ridge and furrow system for the disposal of treated effluent within the Myakka River watershed, the City of Venice has received permission to discharge treated wastewater into Curry Creek, and land spreading of Grade II sludge is under consideration for a site north of the Myakka River State Park. These changes have been the result of "turning off the pipes" leading from the wastewater treatment systems to the bays and the gulf in favor of reuse and recovery through irrigation systems, land spreading, and agricultural reuse. It is important, however, that proper maintenance and control procedures be implemented so the facilities operate as designed.

Also during the past year, the Wingate Creek Mine has been sold. This phosphate mine is located on Wingate Creek, a tributary of the Myakka River in Manatee County. The new owners of the mine stated that they hope to restart the mine soon. This could be a source of elevated phosphate levels in the Myakka. Mining near the headwaters could also result in downstream increases in turbidity.

The Myakka River Basin Project has begun to act as both a collector and a disseminator of information about the watershed. The project office has established computer links with the STORET and ADAPS databases for access to current and historical data on the watershed. These lines will also allow the exchange of project data with other interested parties. The data collected is organized into a database that can be accessed by geographic coordinates, providing high transferability for the future GIS system. The project GIS system, being developed by South West Florida Water Management District and the Soil Conservation Service, will provide accurate and up-to-date information to policy and decision making agencies.

Through participation in the Myakka River Management Coordinating Council meetings, the project has provided input for a draft Management Plan and established links to citizens concerned about the future of the Myakka River. The citizens will be important in developing a Citizens' Monitoring Network for the Myakka River during Year 2 of the project. Through data collected and work done during Year 1, a second salinity source (Curry Creek) for the Myakka River has been identified. This information will be important in assessing the impacts of the man-made drainage systems and consumptive use applications in the watershed.

As Southwest Florida continues to grow, more and more demands will be placed on the Myakka River. These demands will come in many forms; from the need for a potable water source to the need for a protected wildlife corridor. With the knowledge gained and accumulated during the first phase of this study, it will be possible to make recommendations for water quality and quantity standards for the river, and to begin to formulate plans for recommendations for stormwater control and growth management in the watershed.

The STORET database was established by the EPA and contains ambient water quality data for the entire nation. The ADAPS database was established by USGS and contains groundwater level data as well as water quality and quantity data for surface waters.

MYAKKA RIVER BASIN PROJECT

Final Progress Report

This final report is being submitted pursuant to DER Contract No. CM222 Section 6B. It Includes a summary of activities conducted to date by Task designation.

Task 1. Compile/Summarize Information and Project Refinement.

Most of this task is tied to the GIS work that will be
done by South West Florida Water Management District and
SCS. Task 1B (i.e. compiling existing water quality
data) is being done by county staff, and the status is
as follows:

Data collected by the Environmental Services Laboratory is available on disk for just the past three (3) years. However, their data have been reported to STORET in bench record format for the past ten (10) The bench record sheets are being entered by Department of Environmental Regulation staff. In order to gain better access to these data, County Ecological Monitoring Division Staff has established a STORET account and computer link. The link will provide the ability to download data directly to the project computer as well as input data from the project. STORET, as a central repository for state-wide ambient water quality data, provides other programs with access to our data, as well as access for our program to other relevant data. After proper QA review, these types of links and open access to data will be the building blocks of future management strategies. Historical data and trends can provide the basis for projections and supportable management decisions.

On 12/11/89, the Department of Environmental Regulation issued a permit to the City of Venice allowing discharge from the new Advanced Wastewater Treatment Plant (scheduled to go on line in 1991) into Curry Creek. Discharge of 1.5 MGD has been permitted for a total of 63 days per year (2.3 days in July, 2.9 days in August, and the remaining days in December, January and February). On 1/19/90, a presentation relating to effluent discharge into Curry Creek was made at the Myakka River Management Coordinating Council meeting. The presentation was made by John McLane, Manager, City of Venice, and Mike Heyl and Tom Walker,

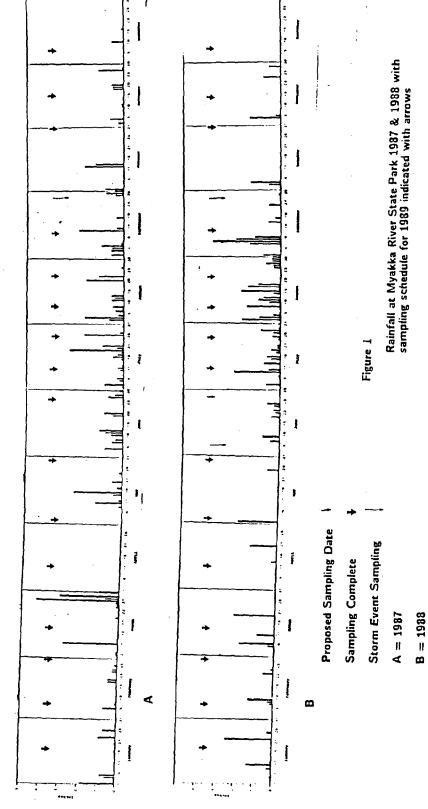
both of Camp, Dresser and McKee, Inc. It included an overview of the model used to predict potential impacts of effluent discharge into Curry Creek, and a statement that the model predicted minimal negative impact to the receiving waters, as required by the Grizzle-Figg Rule. The model used, although tidally influenced, only showed flow direction in the creek towards the west and Roberts Bay. However, several lines of independent evidence indicate that, at least during part of the year, flow is the Myakka River. First, Mote Marine Laboratory's biological survey conducted for Task 5 indicates the occurrence of euryhaline taxa in the area upriver of Snook Haven (Station 7). Second, USGS synoptic tide and current measurements indicate that the direction of flow in Curry Creek at Jackson Road is towards the Myakka River. Finally, Dr. Siler's (of Mote Marine Laboratory) salinity model for the Myakka River does not track the relatively high salinities found in field studies between I-75 and Snook Haven in field Items of interest pertaining to the discharge studies. of effluent into Curry Creek are included in Appendix 1. Situations such as this, where permits are issued, or decisions are made without the best or most up-to-date point the need for coordination data out communication among the various agencies making the decisions. An easily accessible database, organized by basin, could play a prominent role in meeting those needs.

During the course of the year, County staff have identified several other areas with a high potential for negative impact in the Myakka River Basin. These areas include:

- 1. Phosphate Mining at Horse Creek A strong potential exists for the reopening of phosphate mines in the area of Horse Creek in Desoto County¹. Phosphate mining activity in Horse Creek could impact the Big Slough system, which drains into the Myakka River.
- 2. Phosphate Mining at Wingate Creek Mine Similarly, phosphate mining may start up in the area of Wingate Creek. Wingate Creek enters the Myakka River approximately seven (7) miles north of Myakka City.

In contrast to rivers such as the Peace, which has naturally high total phosphorus levels (mean= 2.59 mg/l), the Myakka is characterized by low total phosphorus levels (mean= 0.33 mg/l) (K.M. Hammett, USGS Open File Report 87-472, 1988)

- 3. City of Sarasota's Ridge and Furrow System This project involves effluent disposal on the
 Hi Hat Ranch. This site is near Howard Creek,
 a tributary of the Myakka River that enters at
 Upper Myakka Lake.
- 4. Spreading of Grade II Sludge Sarasota County's Pollution Control Division received a permit application for spreading grade II sludge in an area North of Upper Myakka Lake.
- 5. Wastewater Reclamation on the T. Mabry Carlton Jr. Memorial Reserve As part of Sarasota County's Water Recovery/Recycling Program, it is possible that highly treated wastewater will be used for wetland restoration and ground water recharge on the Reserve. This plan includes discharge of water into Deer Prairie Slough, and/or the Myakka River.
- 6. Development along Charlotte Harbor and the lower Myakka River - Currently there are at least five (5) permits in review for subdivision development along the shores of Charlotte Harbor.
- Task 2. Mapping, Management Evaluation and Date Management Systems. This GIS task is being accomplished through a cooperative agreement between the County and the South West Florida Water Management District, with the assistance (on the soils layer) from the Soil Conservation Service. Aerial photography contracting is complete and SCS is in the process of providing soils data input.
- Task 3. Establish Hydrological Understanding. This is being done under a contract between the Department of Environmental Regulation and USGS. The link between the Myakka River Basin Project computer and USGS computer in Tampa has been made via phone line through the TymNet system. County staff were trained on the use of the prime minicomputer and the ADAPS system in the Tampa office on December 12, 1989. The communication/terminal emulation software and modem are in place and working.
- Task 4. Collect Water. The final sampling event for year 1 took place on 12/4-5/89 (see Figure 1). The total number of regular sampling events for the year was fifteen (15). In addition, three (3) storm sampling events were conducted. Data entry is current for all sampling events (see Appendix 3 and enclosed disks).



- Task 5. Gather Biological Data. Mote Marine Laboratory is under contract to do this work. The botanical inventory and survey was conducted by A.F. Clewell, Inc., and Winchester and Associates (subcontractors to Mote Marine Laboratory). The field effort and data analysis are complete. A preliminary draft of the final report has been submitted (see Appendix 2). Benthic sampling for 1989 has been completed. Identification and preliminary data analysis for the April and September collections has been made (see Appendix 2). Densities of oligochetes and chironomids declined at all stations April to September. Many euryhaline taxa (polychaetes and crabs) were found at Station 7 during September, indicating "an undetected significant saline influence." The plans for Year 2 of the Myakka River Basin Project include another biological sampling and analysis by Mote Marine Laboratory on February 5 and 6, 1990. The final report for this task will then include the results of a full year of analyses.
- Task 6. Lab Analysis. Mote Marine Laboratory has completed data analysis for the remaining sampling events (i.e. 8/21/89-12/5/89), and has received all remaining particulate nitrogen and carbon results from their subcontractor, the South West Florida Water Management District laboratory. Data entry is currently underway and should be completed in February.

APPENDICES

APPENDIX 1 Curry Creek

SARASOTA COUNTY GOVERNMENT

ECOLOGICAL MONITORING DIVISION

INTER OFFICE MEMORANDUM

TO: Jeffrey L. Lincer, Ph.D., Director, Ecological Monitoring

FROM: Susan Lowrey, Coordinator, Water Quality Monitoring

DATE: December 29, 1989

RE: Discharge of treated effluent into Curry Creek

On 12/21/89, I received a phone call from Mr. Phil Segerstrom, a resident of Sarasota County. Mr. Segerstrom voiced strong concerns about the possible detrimental effects of the now permitted discharge of treated effluent into Curry Creek. On 12/11/89, the DER permitted discharge of 1.5 MGD into the creek from the City of Venice's new STP, scheduled to go online in 1991. There was an article in the Sarasota Herald-Tribune on 12/19/89 concerning this action and the concern of some local residents about the action. I have included a copy of this article for your information.

As I checked further into the background of the story, I found several interesting facts that you may also find of interest. Dr. Siler's Myakka River salinity model as it is at this time fails to predict the relatively high salinities found at Snook Haven and upriver to the vicinity of I-75 bridge. One of the objectives of the USGS's synoptic tide and current measurements of the Myakka River in September and November, was to help clarify this point. Kathy Hammett says that the early data from the September measurements shows that even at the high discharge rates that prevailed during the measurement (500 cfs), the direction of flow at Jackson Road was towards the Myakka. I requested a copy of that data. Kathy feels that Curry Creek acts as a second source of salinity for the Myakka (via Roberts Bay).

I also spoke with Tom Walker of CDM. Mr. Walker is the project manager and had more particulars on the proposed discharge. discharge site is where Auburn Road crosses Curry Creek. about 3000 feet east of I-75, and about 1.5 miles east of Jackson Road. He said the quality of the effluent would meet Florida DER's The main plan for the effluent is reuse on golf 5-5-3-1 rule. courses and for other irrigation purposes, and the discharge to the creek was only to occur when and if the reuse water was not needed. DER did permit the discharge for 63 days per year. Interestingly enough, of those 63 days, less than 6 are during the summer rainy season. The other permitted discharge days are during the winter. CDM used a 2-D model for prediction of the fate of the effluent in the creek. The model is not very complex and only makes provisions for flow in one direction...towards Roberts Bay.

Mote Marine Laboratory's preliminary findings for the biological assessment of the Myakka River, particularly in the area upriver from Snook Haven, would also support a second source of salinity in that area. "Station 7 tended to include many euryhaline taxa (polychaetes and crabs) in September with a definite decline of oligochaetes and chironomids. The results indicate that an undetected significant saline influence had affected the downstream study area for a substantial period of time allowing for the colonization of these oligo-mesohaline taxa" (from the December 1989 progress report).

Mr. Segerstrom was referred to our office by Jean Ost. He also spoke to Steve Martin of DNR about the permit. Lois Jones spoke at the last MRMCC meeting about the imminent issuance of the permit. I feel that these facts would be of interest to the Council. I also feel that the situation needs further study to get the complete picture and to accurately assess the potential impacts on the Myakka River.

State Gives Venice OK to Dump Treated Sewage Into Curry Creek

By JAN ANGILELLA Sinff Writer

Venice officials have received permission to dump 1.5 million gallons of treated sewage into Curry Creek every day for part of the year once the city's new treatment plant, begins operating in 1991

The plan, approved Dec. 11 by the state Department of Environmental Regulation, allows the city to pump treated sewage from its new plant onto Knight's Trail Park, Venice-area golf courses and the Waterford subdivision most of the year. But it also allows the city to dump the sewage into Curry Creek, which flows from Roberts Bay to the Myakka River, for 63 days during the rainy season if the golf courses become saturated.

The new treatment plant is scheduled to be operating by March 1991, so the dumping into Curry Creek, if it is necessary, wouldn't begin until July 1991, said project manager Tom Walker of Camp, Dresser and McKee, the engineering consultants for the Venice

ing consultants for the Venice project.
But two Venice residents are questioning the city's plans, saying the dumping could damage the creek and possibly pollute Roberts Bay and the Myakka River.
"I see no reason for them to put it there," said Mike Shrode, who is working with James Ponder to

working with James Ponder to push Venice officials to explore other alternatives. "I just get worried anytime the government starts messing with the waterways and the environment around here."

A DER official said Monday the department gave the city a permit to dump the treated sewage into the creek because it will be extensively treated beforehand. "The discharges will have advanced

waste treatment," said Ed Snipes, a permitting engineer with the DER.

Walker even went so far as to say the dumping could actually im-prove the water quality of the creek, which he described as somewhat stagnant and the recipient of polluted storm runoff. "The water we'll be pumping will be of better quality than the water already in the creek," he said.

Shrode and Ponder recently met with Venice Utilities Director John Lane and City Manager John MacLean to raise concerns about the

"My objection is putting it to the only feed into the Myakka River, when we're saying the Myakka River should be protected," Ponder said. The Myakka River is protected from pollution under the state's Outstanding Florida Waters pro-

APPENDIX 2

Botanic Survey and Benthic Species List Task 5

Part A Botanic Survey

METHODS

I. Wetlands Bordering Benthic Transects

Nine vegetation transects were established perpendicular to the river and extend from the river's edge to just inland of the riverine wetland. The transects correspond to the MML benthic transect stations, and are centered on the permanent transect markers placed by MML. Locations of the transects are indicated on the vegetation map produced by AFCI as T1-7. In addition to the seven MML stations, a pipeline control station was selected just upstream of the pipeline transect (T5), and transects were placed on both east and west sides of the river (PCE and PCW) at this station. It was also intended that the pipeline crossing be sampled with transects on both sides of \cdot the river. However, the east bank of the river at the pipeline crossing extends vertically from the water's edge to palmetto uplands, so no vegetation sampling was done on the eastern bank. With the exceptions of the pipeline and pipeline control transects, all transects were placed on the east side of the river. At each of the transects, the following data was collected:

A. Topographic Profiles.

Elevations were taken at intervals of 25 ft.

Additional elevations were made within these intervals to depict topographic discontinuities, such as levees and

sloughs. Elevation data were measured to the nearest 0.1 ft using a level and rod, and are based on an elevation of 0.0 ft at the water's edge. The exact length of each profile varies. The lengths of the transects varied from 0.0 (the eastern bank of the pipeline crossing) to 850 ft (T1). The palmetto line marks the boundary between the wetlands and the uplands.

B. Woody Plant Species Density and Basal Area.

A series of 25 by 25 ft quadrats was established at each transect, centered on the topograpic profiles, and extending the length of the profile. The terminal quadrats have a length of 25 ft or less. All woody plant species with diameter at breast height (dbh) of 1 inch or more were tallied and trees with dbh of 4 ins. or more were measured to determine basal area.

B. Vascular Plant List.

All vascular plant species present were listed for each quadrat along the transects. The lists were compiled to summarize all species in all transects.

C. Overall vegetation cover.

A visual estimate of the overall percent cover in the arboreal and undergrowth strata was made for each quadrat and averaged into a values for each of the transects.

II. Shoreline groundcover transects

In addition to the vegetation transects bordering benthic transects, 27 shoreline inventory stations were selected at intervals, between, and including, T1 and T7. The shoreline inventory stations are designated by the number for the MML transect immediately upstream. For example, vegetation transects 4-1, 4-2, and 4-3 lie between MML transects T4 and T5, and 5-0 occurs at transect T5. All of these stations were located on the east side of the river, except for 6-1 which was located on north side of Curry Creek where it joins the Myakka River. In addition, two additional shoreline stations were selected on both sides of the river at the pipeline control transect.

At each shoreline inventory station, non-arboreal species abundance was quantified by recording species occurring at point intercepts at 1-ft intervals along 3 parallel, 25 ft long lines that extended perpendicularly from the river's edge. The method used provides data compatibility with a previous MML study on the Myakka River below I-75.

III. Vegetation Reconnaissance and Map.

While moving between sampling stations, general reconnaissance of the vegetation was done along the river corridor, from Snook Haven to the dam below Lower Myakka Lake. Written and taped notes were incorporated into a Narrative Report (Appendix XX) and a Draft Vegetation Map (Appendix XX). See the appendices for exact methodology used.

Field work was carried out by Brian Winchester of Winchester Environmental Associates (WEA), and Reed Beaman

of A. F. CLewell, Inc. (AFCI) on 28 June - 1 July, 1989 and by Andre Clewell and Reed Beaman on 26-27 July 1989.

RESULTS

The forest along the Myakka River contained five overstory tree species: Pinus eliottii (slash pine),

Quercus laurifolia (laurel oak), Quercus virginiana (live oak), Sabal palmetto (sabal palm), and Ulmus americana (American elm). The common understory trees include Cephalanthus occidentalis (buttonbush), Fraxinus caroliniana (pop ash), Gleditsia aquatica (water locust), and Salix caroliniana (willow).

Table XX shows woody species density in the vegetation transects bordering benthic stations for species 1 inch dbh or more. To make data from different size transects comparable, tree density is given in number of trees per acre, and the sample size for each transect is noted.

Overall density for all transects was 382 trees per acre.

Table XX shows basal area values per acre for species with 4 inch dbh or more. Sabal palmetto was not included in basal area measurements.

Relative densities of groundcover species based on the shoreline inventory intercepts are presented in Table XX.

The species are arranged by overall relative density for all 27 transects. Relative density for species present within each shoreline inventory transect is tabulated. The occurrence of intercepts without vegetation (bare soil or

leaf litter) was included in the calculations of relative density, and was significant for most transects. Herbaceous species with overall relative densities above 1.0 percent include: Axonopus affinis, Brachiaria mutica, Cassia nictitans, Coreopsis leavenworthii, Cynodon dactylon, Cyperus spp., Digitaria serotina, Ludwigia repens, Lythrum flagellare, Panicum hemitomon, Paspalum caespitosum, Paspalum notatum, Phyla nodiflora, Pluchea oderata, Polygonum punctatum, Tripsacum dactyloides, and Vigna luteola.

In addition to the tree and herbacEous species, there are undergrowth shrubs, lianas and epiphytes locally common as associates in the hydric hammock. All species encountered in the study area are listed alphabetically in Table XX and by life-form in Table XX. These lists include not only species that occured within sample areas, but throughout the entire river basin from Snook Haven to the dam below Lower Myakka Lake.

Epiphytes were abundant in the river basin. However, the species richness (nine species) is low this far north of the everglades and a true tropical climate.

DISCUSSION

Hydric Hammock

The hydric hammock, as defined by Vince et al. (1989), is a vegetation type generally uncommon outside of Florida. Stands of hydric hammock occur in Georgia near Savannah in

the Atlantic coastal plain. In Florida, hydric hammocks tend to occur in the northern half of the Florida penninsula just interior to the salt marshes that dominate the coastal zone along the Gulf of Mexico, and on the Atlantic coast, along the west bank of the upper St. Johns River and just inland of the coastal dunes.

Vince et al. (1989) sampled hydric hammock on Shep's Island in Myakka River State Park along Upper Myakka Lake (pp. 25-26, photo p. 27). For Shep's Island, they list five tree species. These five species occurred in the present study area as well. In addition, we noted Pinus elliotii as an occasional species, but it did not occur in any of our transects. Viburnum obovatum and Salix caroliniana are understory trees that did occur in the transect areas, but were not listed for the Shep's island study. Tree density for the Shep's Island study is given as 302 trees per acre (converted from 747 trees/ha), a value comparable to tree densities shown for the transects in Table XX.

Species that are typical of hydric hammock in the northern part of the state but are notably absent along the Myakka River include <u>Liquidambar styraciflua</u> (sweetgum), <u>Pinus taeda</u> (loblolly pine), <u>Quercus nigra</u> (water oak) in the overstory, and <u>Carpinus caroliniana</u> (ironwood) in the understory. The Myakka is south of the known ranges of the above species. Also, it is notable that the Myakka River is in a cresent along the southwest Florida coast that lacks any cypress.

Although hydric hammock is the only vegetation type that can be mapped at the scale used (1:7200), there is substantial, yet gradual change in the river between T4 and Vince et al. (1989) called all hydric hammock wetlands. This is not true in the Myakka basin, particularly below T5. Downstream from T4 the hydric hammock community is mesic, and largely set back from the well incised river channel. Above T5, the hydric hammock is truly hydric, dominated by laurel oak, American elm and sabal palm. These could not be mapped as two vegetation types, owing to overlap in species and the intermixing of types along the with vagaries of elevational variation. For instance, the live oak becomes relegated to occasional topographic highs and the The occurence of these vegetational upland edges. irregularities results in the formation of mini-communities within the one large hydric hammock community. Individual characteristics of three of these minor community types (sloughs, marshes and point bars) are discussed below.

Sloughs

The popash, willows, and water locusts inhabit the frequent shallow sloughs found throughout the river channel. Popash often grows densely around the mouth of the slough. Water locust is usually found back in a ways from the river channel. The sloughs downstream of T5 tended to have broad shallow marshes at their mouths, and contained species such as Crinum americanum, Hymenocallis, and Carex gigantea along

the shoreline. These species were seen much less frequently upstream of T4.

Larger oxbows with more open water were often filled with dense floating mats of pickerelweed (<u>Pontederia</u> cordata), intermixed with <u>Salvinia</u> and <u>Scirpus</u> cubensis, also floating. These impenetrable floating mats frequently covered areas of two to three acres, and appear as a bright crimson on color-IR aerial photos.

Marshes

Marsh vegetation characterized several of the shoreline transects especially those downstream of Border Road. The blue paspalum (Paspalum caespitosum) was often a dominant in this habitat, especially in transects 5-1 and 6-1. Other species commonly found as part of this association include:

Acrostichum acrostichoides, Blechnum serrulatum,

Hymenocallis, Osmunda regalis, Pluchea oderata, Rumex verticellatus, Sagittaria lancifolia, Scirpus validus,

Spartina bakeri, and Typha.

The species listed above were not seen commonly above rocky shoals. It is noted in the narrative that the blue paspalum and the bulrush were not seen upstream of segment 35. The marshes farther upstream are smaller, less diverse, and more relegated to the shoreline where they compete with willows and other woody species.

There is a large marsh just above the dam that marks the northern boundary of the study area. Species

composition was not recorded for this marsh because it is out of the study area. The water impoundment caused by the dam probably had a significant causal effect toward the formation of a marsh above the dam.

Point Bars

Point bars alongh the river in the study area are typically underdeveloped and often overgrown by mature oakpalm forest rather than by the expected willow. Again, the dam as well as the two lakes upstream could be trapping sand that would otherwise move downstream and cause the point bars to grow.

CONCLUSIONS

The Myakka River from just downstream of I-75 up to the dam below Lower Myakka Lake is all one plant community type, the hydric hammock. Although the Myakka hydric hammock is comparatively depauperate of species compared to other plant communities occurring in Florida, it is far from being a homogeneous assemblage of plant species.

Rather, microperterbations in elevation, differences in the depth of the underlying limestone, and proximity to tidal influences all affect the composition and density of both woody and herbaceous species.

Slight differences in elevational preferences between the 10 tree species occurring in this hydric hammock, give the forest a mosaic structure. Popash, water locust and

willow inhabit the shallow sloughs but surrounding this association is an oak-elm gallery with a broad canopy that hides the slough community from view in an aerial photo.

Some of the hydric species present in the hammock in upper part of the river in the study area are lacking in the lower part. In the lower (more mesic) part of the river, species such as popash (very common in the upper transects), Gleditsia aquatica, and Salix carolinana, did not occur in transects below T4.

The hard limestone bottom found upstream of rocky shoals slows the process of incising the channel. The river channel downstream is more incised and is therefore less likely to overflow its bank during high water periods. The result is a more mesic forest where the river bank is higher, below T4

Measuring density and distrubution of tree species would probably not make a good short term indicator of hydrologic variation. However, short-lived marsh and shoreline herbs present the opposite difficulty. They are too mobile, and and individual species can potentially be responding to a multitude of factors, such as poor reproduction the previous year.

Changes in the species ranges within the river basin could be monitored on an annual or semiannual basis. The blue paspalum for instance, occurred upstream only as far as segment 35. Progression upstream for this species would

probably indicate higher water levels in the river; a retreat downstream would indicate a hydrological drawdown.

Rather than trying to interpret individual plant species as hydrological indicator, a more viable alternative would be to set up permanent plots within specific subcommunities, such as in the shallow sloughs and blue paspalum marshes. A linear series of small quadrats placed perpendicular to the river, sampled annually might indicate whether there is a progression of shoreline species up or down the bank.

Although vegetation composition is a useful tool in determining wetland status, it may be that in the Myakka River corridor the vegetation is so depauperate and so relegated to odd corners of the corridor that using botanical sensors alone for hydrologic alteration would be inadequate without concurrent use of benthic macroinvertebrate indicators and standard hydrological methods.

TABLE _____.Percent frequency of occurence of species in shoreline transects using point-intercept method (78 points along 3 parallel lines 10 feet apart in each subseries. The pipeline crossing has two control subseries, one on either side of the river (East & West).

TRANSECT SERIES		+		•		-2-	;	i				į	7		;		ď	į							CONTROL	OVEDAL	1
	•	. '	,			, '		•	•	•	ľ	(,		•		٠,							5	100	בר בר	1
SOBSERIES	- -		y	<u>-</u>	-	7	v 1	>	-	V	ข	-	-	7	٠,	5	_	7	~ ~	0	-	 N	M	-	⊃ ພ		
Digitaria serotina	15	•	0 3	34 5	10			6	22	Ŋ	M	m		-					ø					-		,	4.34
Paspalum caespitosum	23	27		3 12	_											14	22		9	_	S					4.	4.02
Pluchea oderata	-				v	21	M	8	-		4	9			_		4				4		2	M		'n	3.35
Cynodon dactylon		10	0	4	•	80	4	14	•	0		M		-	9	_	0									w.	3.02
Smilax bona•nox				•	_				۲	_			œ			19	_	4		_	Ī	9			35	. ~i	2.93
Panicum sp	-							_	M	-		-	-		-				_		_	4	М	32		۲,	2.65
Phyla nodiflora					S		58	7				7			7	21	8								-	.2	2.65
Coreopsis leavenworthii	7				•		•	10	•	7	-	7			4	-	~		2					•	4	2.	2.46
Grass seedlings							4	~	-	M	æ	7	5	38	o	m	2	m							m	7	95.
Mikania scandens	m					7			-	M		9		83		-	7		_	-	2		_		4	۲,	5.46
Polygonum punctatum														07			.		72			; -	2	٥		۲,	95.
Iripsacum dactyloides															-						63	m				.2	2.31
Lythrum flagellare	-				4	M	75	-	M						m											.5	2.03
Serenoa repens																			51	_						•	1.89
Paspalum notatum																		71						33	m	-	1.84
Brachiaria mutica	5 7		_	5																							1.61
Ludwigia repens					7	•	4	M	_		4			4					_		m	Ī	vo.	-	-	-	1.28
Vigna															m	9	_	9	_			•	0		5	<i>-</i> -	<u>8</u>
Axonopus affinis	•				7	5	_	æ	-		S																60.1
Cassia nictitans																		-	4	٥	•	~			-	<i>-</i> -	1.04
Cyperus spp.							M			_	-			12				m						_	2	-	1.04
Polypremum procumbens				Z.				7		-	-					Ŋ	,		_						2	ö	0.94
Paspaium sp					18												2				•		_			ö	0.00
Eryngium baldwinii						М		_	9	7		-			-	-			_							ö	0.76
Cyperus strigosus			M	•	·	_								M								_	νο.			ö	99.0
Micranthemum umbrosum																	_	-	0	_	_				-	ö	0.57
Rumex verticillatus																				-	2					0	0.57
Scirpus validus						,											2			_	0					9	0.57
Diodia teres						•					-				м	m								4	M	0	0.52
Setaria geniculata										9		M			4											0	0.47
Dichanthelium sp	-										-		-		©											0.	0.43
Hypericum mutîlum						_								80		-					_					0.	0.43

					,							
Oxalis corniculata		-	3	-	S							0.43
Sabal palmetto	7				-		3 1		-	-		0.43
Eragrostis cf. elliotii		.10										0.38
Alternanthera philoxeroides			•	-		-	-		4			0.33
Cephalanthus occidentalis				m		-					2	0.33
Chloris petrea		'n	-			-		-		-		0.28
Eleocharis baldwinii								M		w,		0.28
Eleocharis sp										7 7		0.28
Myriophyllum brasiliense	·									& 0_		0.28
Hydrochloa caroliniensis										4		0.28
Verbena	ż					•		•	60			0.28
Baccopa moneri						4				-		0.24
Dicot seedlings			-				-	-				0.24
Echinochloa			•			•						0.24
Hydrocotyle umbellata			4	_			-	•		-		0.54
Mitchella repens	-				-	_					<u>.</u>	0.24
Pilea				-		-					m	0.24
Viburnum obovatum							-	-			m	0.24
Dichanthelium laxiflorum	-	-										0.19
Erigeron cf. quercifolius									m		-	0.19
Fimbrisytlis castanea										ر. د		0.19
Ceratopteris							•			Ś		0.19
Hypericum hypericolodes	3				•	4		m				0.19
Panicum dichotomiflorum	n								m			0.19
Sabatia sp.		-						7				0.19
Samolus ebracteatus		-	-				-				-	0.19
Toxicodenaren radicans	-							- .	m			0.19
Ampelopsis arborea							M		-			0.14
Fuirena scirpoidea							4					0.14
Lindernia grandiflora							7					0.14
Panicum hemotomum								4				0.14
Rubus betulafolius									7			0.14
Sabatia calycina			-		-		_					0.14
Hypericum gentianoides				-								0.10
Bumelia reclinata					m							0.0
Carex spp.			-									0.0
Crinum americanum								m				0.0
Croton sp.				-			_					0 0
Cyperus haspan						•				m		0.0

Ludwigia peruviana																								
										٠			_						-					0.0
																	M							0.09
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				•																•				0.05
																			-					0.02
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									-						,									0.05
Erechtites hieracifolia																				_				0.05
																				_				0.05
								•							_									0.05
																						-		0.05
																					-			0.05
Hydrochloa caroliniensis								•	<u>.</u>															0.05
										7														0.05
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	56 58 55 22	35	22	۶	28	75	3	15 36	6 59	7	51	81	9	40 2	26	55	54	31	7	2	28	75	17	35.43

TABLE ___. Tree densities by transect, and estimated percent ground and canopy cover. Trees over 1 inch dbh were tallied and adjusted by the area sampled to yield the number of trees per acre for each transect and a total for all transects.

TRANSECT:	П	7	e e	4	ហ	9	7	PCE	PCW	ALL TRANSECTS	PERCENT
Acres Sampled:	.3903	.0230	.0505	.0624	.0399	.0055	.0344	.0629	6900.	.6758	DENSITY
		1	! ! !		Trees	s per	Acre-		1		
Sabal palmetto	277	87		96			233	286		210	4.
Fraxinus caroliniana	100		79	64						70	18.32
Quercus laurifolia	44	174	20	64		182	59	64		47	2
Cephalanthus occ.	28			48	•					21	٠
Viburnum obovatum	15		20	48				16		16	•
Bumelia reclinata				64						9	•
Gleditsia aquatica	7	87			-					4	
Quercus virginiana	ω						•			4	•
Salix caroliniana			ო							4	
ALL SPECIES	474	348	178	384	0	182	262	366	0	382	100.00
TREES IN SAMPLE	185	æ	6	24	0	Т	6	23	0	259	
ESTIMATED PERCENT COVER			•		·						
Overstory:	45%	50	15	15	30	35	10	37	. 25		
Groundcover:	20%	52	22	25	57	30	70	20	30		
						·					

Basal TABLE Basal area (square inches per acre) of tree species 4 inches dbh or more. Ba area is adjusted by the size of the area sampled, due to differences in transect length. TABLE

TRANSECT:	r.	2	Е	4.	2	7	PCE	PCW	ALL	RELATIVE BASAL AREA
Quercus laurifolia Fraxinus caroliniana Quercus virginiana Gleditsia aquatica Salix caroliniana Viburnum obovatum	510 126 79 13	1826 652	178 198 158	609 176	2909	261	899	·	527 104 46 30 12	72.89% 14.38 6.36 4.15 1.66 0.55
ALL SPECIES	736	736 2478	534	785	2909	261	899		723	66.66

MYAKKA RIVER FLORA (ALPHABETICAL LIST)

Acrostichum aureum Aeschynomene americana Alternanthera philoxeroides Amaranthus floridanus Ambrosia artemisiifolia Ampelopsis arborea Andropogon virginicus Asclepias perennis Axonopus affinis Baccharis halimifolia Bacopa monnieri Bidens laevis Blechnum serrulatum Boehmeria cylindrica Brachiaria mutica Bumelia reclinata Carex cf. gigantea Carex sp. Cassia nictitans Centella asiatica Cephalanthus occidentalis Ceratopteris Cicuta mexicana Clematis virginiana Conoclinium coelestinum Coreopsis leavenworthii Crinum americanum Croton sp. Cuscuta sp. Cynodon dactylon Cyperus haspan Cyperus liqularis Cyperus oderatus Cyperus retrosus Cyperus strigosus Cyperus surinamensis Desmodium incanum Dichanthelium laxiflorum Dichanthelium sp. Dichromena colorata Digitaria serotina Diodia teres Diodia virginiana Echinochloa sp. Eclipta alba Eleocharis sp. Eleocharis baldwinii Eleocharis vivipara Encyclia tampensis Eragrostis cf. elliottii Erectites hieracifolia Erigeron cf. quercifolius

Eryngium baldwinii Eupatorium capillifolium Eupatorium compositifolium Eustachys petraea Fimbristylis castanea Fraxinus caroliniana Fuirena scirpoidea Galactia macreei Galium sp. Gleditsia aquatica Hydrochloa caroliniensis Hydrocotyle ranunculoides Hydrocotyle umbellata Hydrolea corymbosa Hymenocallis sp. Hypericum gentianoides Hypericum hypericoides Hypericum mutilum Hyptis alata Ilex decidua Juncus megacephalus Lechea sp. Lemna obscura Lepidium virginicum Leucothoe racemosa Lindernia grandiflora Ludwigia octovalvis Ludwigia peruviana Ludwigia repens Lythrum flagellare Micranthemum umbrosum Mikania scandens Mitchella repens Muhlenbergia capillaris Myrica cerifera Myriophyllum aquaticum Osmunda regalis Oxalis corniculata Panicum dichotomiflorum Panicum hemitomon Paspalum caespitosum Paspalum notatum. Paspalum vaginatum Phlebodium aureum Phyla nodiflora Pilea cf. microphylla Pinus elliottii Pluchea odorata Polygala sp. Polygonum punctatum Polypodium polypodioides Polypremum procumbens Pontederia cordata Portulacca pilosa

Psychotria nervosa Ptilimnium capillaceum Quercus laurifolia Quercus virginiana Rhynchospora sp. Rubus betulifolius Rumex verticillatus Sabal palmetto Sabatia calycina Sagittaria lancifolia Sagittaria subulata Salix caroliniana Salvinia minima Samolus ebracteatus Schinus terebinthifolius Scirpus cubensis Scirpus validus Serenoa repens Setaria geniculata Smilax bona-nox Smilax laurifolia Spartina bakeri Sporobolus virginicus Tillandsia fasciculata Tillandsia setacea Tillandsia usneoides Tillandsia utriculata Toxicodendron radicans Trichostema dichotomum Tripsacum dactyloides Typha domingensis Ulmus americana Urena lobata Verbena sp. Viburnum obovatum Vigna luteola Vitis aestivalis Vitis rotundifolia Vitis shuttleworthii Vittaria lineata

MYAKKA RIVER FLORA BY LIFE FORM

CANOPY TREES

Pinus elliottii Quercus laurifolia Quercus virginiana Sabal palmetto Ulmus americana

SMALL TREES AND SHRUBS

Baccharis halimifolia
Bumelia reclinata
Cephalanthus occidentalis
Fraxinus caroliniana
Gleditsia aquatica
Hypericum hypericoides
Ilex decidua
Leucothoe racemosa
Myrica cerifera
Psychotria nervosa
Rubus betulifolius
Salix caroliniana
Schinus terebinthifolius
Serenoa repens
Viburnum obovatum

LIANAS

Ampelopsis arborea
Smilax bona-nox
Smilax laurifolia
Toxicodendron radicans
Vitis aestivalis
Vitis rotundifolia
Vitis shuttleworthii

EPIPHYTES

Encyclia tampensis
Phlebodium aureum
Polypodium polypodioides
Tillandsia fasciculata
Tillandsia setacea
Tillandsia usneoides
Tillandsia utriculata
Vittaria lineata

GRAMINOIDES

Andropogon virginicus Axonopus affinis Brachiaria mutica

Carex sp. Carex cf. gigantea Cynodon dactylon Cyperus haspan Cyperus ligularis Cyperus oderatus Cyperus retrosus Cyperus strigosus Cyperus surinamensis Dichanthelium sp. Dichanthelium laxiflorum Dichromena colorata Digitaria serotina Echinochloa sp. Eleocharis sp. Eleocharis baldwinii Eleocharis vivipara Eragrostis cf. elliottii Eustachys petraea Fimbristylis castanea Fuirena scirpoidea Hydrochloa caroliniensis Juncus megacephalus Muhlenbergia capillaris Panicum dichotomiflorum Panicum hemitomon Paspalum caespitosum Paspalum notatum Paspalum vaginatum Rhynchospora sp. Scirpus cubensis Scirpus validus Setaria geniculata Spartina bakeri Sporobolus virginicus Tripsacum dactyloides Typha domingensis

FORBS

Acrostichum aureum
Aeschynomene americana
Alternanthera philoxeroides
Amaranthus floridanus
Ambrosia artemisiifolia
Asclepias perennis
Bacopa monnieri
Bidens laevis
Blechnum serrulatum
Boehmeria cylindrica
Cassia nictitans
Centella asiatica
Ceratopteris
Cicuta mexicana

Clematis virginiana Conoclinium coelestinum Coreopsis leavenworthii Crinum americanum Croton sp. Cuscuta sp. Desmodium incanum Diodia teres Diodia virginiana Eclipta alba Erectites hieracifolia Erigeron cf. quercifolius Eryngium baldwinii Eupatorium capillifolium Eupatorium compositifolium Galactia macreei Galium sp. Hydrocotyle ranunculoides Hydrocotyle umbellata Hydrolea corymbosa Hymenocallis Hypericum gentianoides Hypericum mutilum Hyptis alata Lechea sp. Lemna obscura Lepidium virginicum Lindernia grandiflora Ludwigia octovalvis Ludwigia peruviana Ludwigia repens Lythrum flagellare Micranthemum umbrosum Mikania scandens Mitchella repens Myriophyllum aquaticum Osmunda regalis Oxalis corniculata Phyla nodiflora Pilea cf. microphylla Pluchea odorata Polygala sp. Polygonum punctatum Polypremum procumbens Pontederia cordata Portulacca pilosa Ptilimnium capillaceum Rumex verticillatus Sabatia calycina Sagittaria lancifolia Sagittaria subulata Salvinia minima Samolus ebracteatus

Trichostema dichotomum

Urena lobata Verbena sp. Vigna luteola

VEGETATION MAP

A. F. CLEWELL, INC. 1989

This map shows the Myakka River and the extent of its riverine vegetation from Snook Haven to the dam below Lower Lake Myakka, Sarasota County, Florida.

Only one vegetation type can be mapped at this scale: HYDRIC HAMMOCK, as defined by Vince et al. [The Ecology of Hydric Hammocks: A Community Profile, 1989, U.S. Fish Wildl. Serv. Biol. Rep. 85(7.26), 81 pp.].

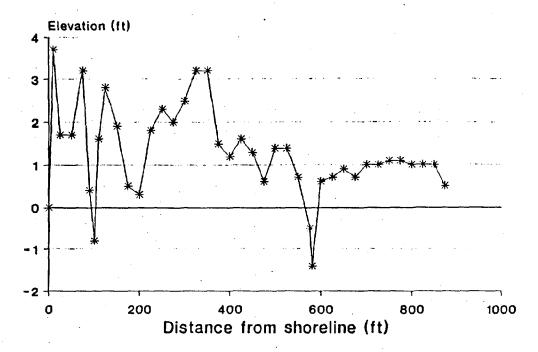
Numerous sloughs interrupt the Hydric Hammock. The sloughs often contain dense growths of shrubs and small trees, such as popash, buttonbush, and willow. These growths, in turn, are often covered by a gallery of overhanging oaks typical of the Hydric Hammock. Numerous small patches of marsh occur along the shoreline.

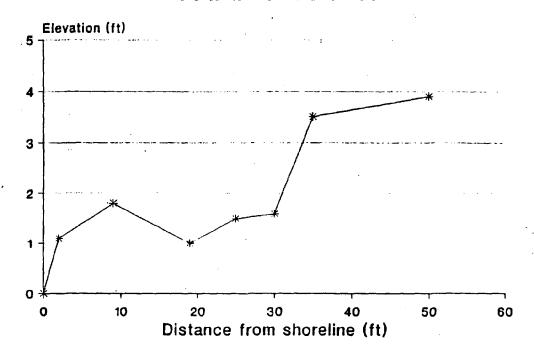
Several sloughs contained expansive floating mats of pickerelweed, with bulrush (<u>Scirpus cubensis</u>) and a floating fern (<u>Salvinia minima</u>) growing intermixed. The locations of several mats are shown.

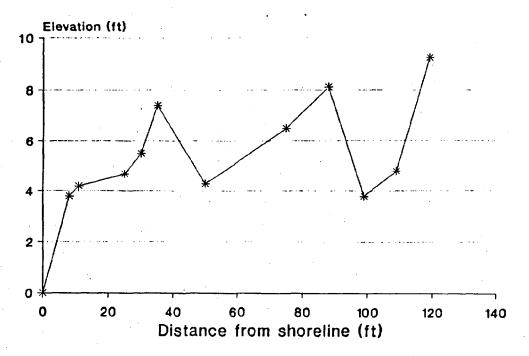
This map was traced from four USGS aerial photographs dated June and August, 1975 (Scale: 1:7200), prepared by Kucera & Associates, Inc. The extent of the Hydric Hammock was determined by Brian Winchester from interpretation of these photos and the integration of information from other sources. These sources were: (1) field observations, (2) examination of 1981 color infrared aerial photos supplied by Sarasota County, and (3) historic black and white aerial photos from 1948 and 1957. The older photography allowed the exclusion of mesic uplands that were once open pinelands and that have subsequently been colonized by hardwoods and palms of the Hydric Hammock community. Some excluded areas are labeled as High Hammock.

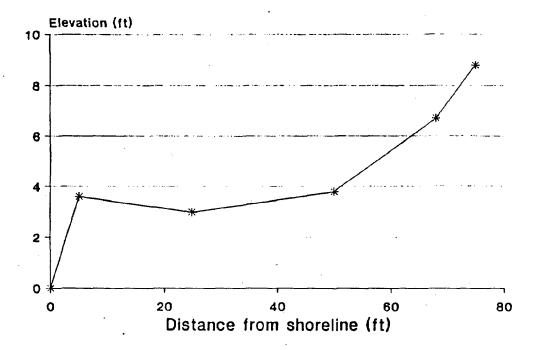
Roads, electric power transmission lines, and several other geographic features are also shown. The river was divided into 86 segments for ease in locating specific reaches. The segments below I-75 were designated by the letters A through F. The segments above I-75 were designated by numbers 1 through 80. Each is drawn to the outside of the Hydric Hammock boundary and circled.

Also shown on the map are seven Mote transect locations. They are designated as T1 through T7. Between each adjacent pair of these transects are three vegetation transects. The vegetation transects are designated by the number for the Mote transect immediately upstream. For example, vegetation transects 4-1, 4-2, and 4-3 lie between Mote transects T4 and T5.

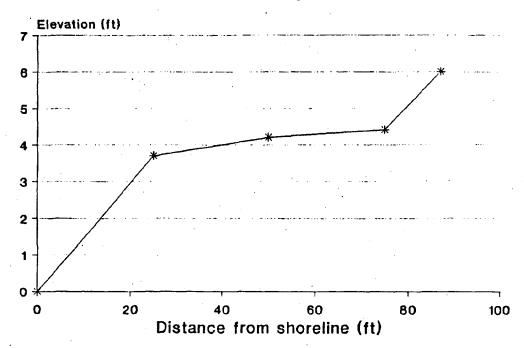


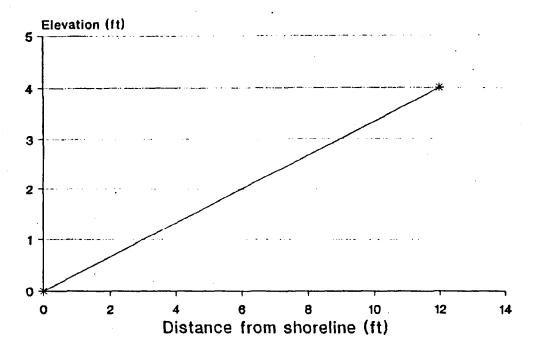


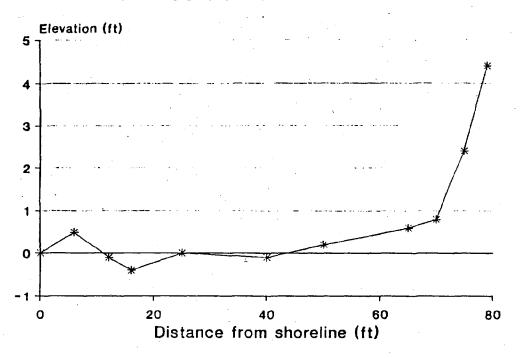




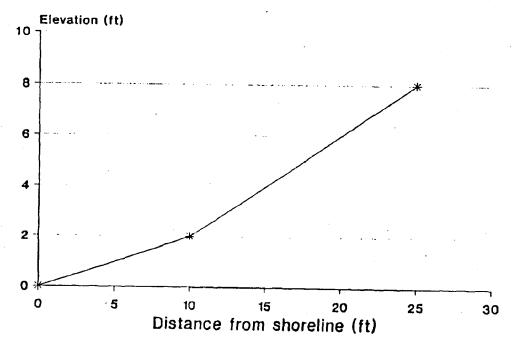
TRANSECT 5 (Pipeline--West)



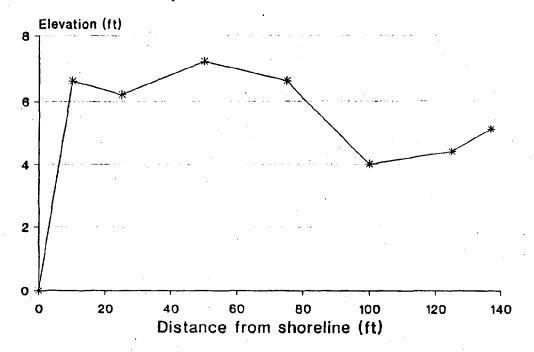




PCW (Pipeline Control--West)



PCE (Pipeline Control--East)



MYAKKA RIVER NARRATIVE

The following narrative was dictated by A. F. Clewell into a portable tape recorder during reconnaissance by outboard motor boat from Snook Haven to the dam below Lower Lake Myakka on July 27, 1989. The narrative from the tape was revised to eliminate superfluous comments and to make it more easily readable.

In order to determine locations, the river was divided into 86 segments, labeled A through F and 1 through 80. Segments 1 through 80 are located on mylar overlays for two color infrared prints (9X9 inch) of aerial photographs that show the river from I-75 to the dam. These photographs are labeled HHC-3 and HHC-14 and are the property of Sarasota County. A copy of each overlay is appended to this narrative. Segments A through F lie between Snook Haven and I-75 and are designated on a vegetation map occurring elsewhere in this report.

Conventions used in the narrative are as follows. River segments are typed in bold face. "Right" and "left" always assume that the boat and the observer are heading upstream (towards the dam or up a slough). If a plant is named only by its genus, it belongs to species named elsewhere in the report. Often, only one species is named for a genus in the report, and thus the generic name in the narrative will belong to that species.

NARRATIVE

A Departing up river from Snook Haven. Channel is incised, with SR (=Serenoa repens, saw palmetto) growing to the edge. Forest on both sides is dominated by QV (Quercus virginiana, live oak) and SP (Sabal palmetto, cabbage palm). Much poison ivy along forest edge, and grapes (Vitis) draping down banks. Shoreline with patches of pickerelweed (Pontederia cordata) and leather fern (Acrostichum) and occasionally Tripsacum.

B Going around curve to the left, there is a slight point bar on the right side containing blue paspalum (Paspalum caespitosum) and some Pluchea.

C Steep curve to the left. Amaranthus growing on shore with blue paspalum. Houses on left bank. Forest to the right side is QV, SP, SR, interrupted by a couple of marshes of blue paspalum, Spartina bakeri, cattails (Typha), Sagittaria lancifolia, Hymenocallis, royal fern (Osmunda regalis), etc.

D Curve left. A slough enters from the right with cattails in its mouth. Then a marsh (transect site 6-3), which contains Spartina bakeri, etc.

E Cruving right. SR growing to the edge of both steep banks. Forest of QV, SP. <u>Cassia nictitans</u> on bank.

- F Steep curve to the left. Cattails along the shore on right side. Then broad cuvre to the left. <u>Vigna</u> on bank. Low forest either side of QV, SP.
- 1 Forest on either side with much PE (<u>Pinus elliottii</u>, slash pine), mixed with QV, SP and SR growing to the edges of the steep banks. Continues in Segment 2.
- 3 A marsh lies on the shore in front of a house to the right side, with blue paspalum, <u>Vigna</u>, <u>Acrostichum</u>. Around a steep bend, with shoreline plants consisting of <u>Sagittaria lancifolia</u>, pickerelweed, blue paspalum, bulrush (<u>Scirpus validus</u>), cattails, <u>Echinochloa</u>.
- 4 A point bar contains much cattails, which extend into the mouth of a slough. Bulrush present.
 - 5 Shoreline contains a little royal fern.
- 6 Cattails and pickerelweed growing on shore at mouth of Curry Creek. Spoil banks. Schinus seen here but no further up river.
- 7 Houses on right side. Forest on left side of QV, SP, a few PE, with SR to the edge of the river bank. A creek enters from the right.
 - 8 Dense forest of QV with a tall understory of SP.
 - 9 Steep banks with SR growing to the edges.
- 10 Banks are 6-8 feet tall with SR to the edges. A creek enters from the left with pickerelweed and blue paspalum along the shore.
- 11 A creek enters from the right, just past the bridge for Border Road. Shoreline with royal fern, pickerelweed, <u>Panicum</u> <u>dichotomiflorum</u>, and with <u>Cassia</u> <u>nictitans</u> higher on the bank.
- Later, we explored the creek (slough) on the right. It was narrow. <u>Crinum</u> blooming. Popash line the banks. Eventually curves to the right. <u>Carex gigantea</u> at water's edge. Steep banks with SR.
- 12 A woods on low ground of QV, SP on the left. A steep, high bank on the right has SR growing to its edge.
- 13 Patches of shoreline vegetation, including <u>Sagittaria</u> <u>lancifolia</u>, blue paspalum, <u>Cassia</u>, bulrush, <u>Echinochloa</u>, pickerelweed, <u>Eustachys</u>, <u>Panicum</u> <u>dichotomiflorum</u>, <u>Rumex</u>.
- 14 Creek enters from left; its mouth has pickerelweed, <u>Sagittaria lancifolia</u>. A narrow levee on the left tails off into a flat of QV and SP, with an undergrowth of popash (<u>Fraxinus caroliniana</u>).

Later, we explored that creek (slough) on left. It was blocked off but we could see an old oxbow filled with marshy and woody vegetation, including Hymenocallis.

- 15 A small short slough enters from the left, interrupting the continuation of the low flat of QV, SP. High bank on right side. Also a marsh along the left with bulrush and pickerelweed.
- 16 Sharp curve to the left with a point bar containing SP, QV. A creek enters from the right with a broad marsh at its mouth, containing blue paspalum, <u>Saqittaria lancifolia</u>, etc.
- 17 The low woods of QV, SP continues on the left side. A low hammock is on the right side. Then houses on the left bank. Curving sharply to the right, there are willows (Salix caroliniana) on the curve.
- 18 A large slough enters from the left. Houses line the slough. A point bar contains blue paspalum, <u>Sagittaria lancifolia</u>, <u>Vigna</u>, <u>Pluchea</u>. Behind that point bar is a low-lying woods of QV and SP. A low QV-SP woods is on the right, also.

Later we explored the slough from the left. It widened and was flanked by houses. A diversion contained floating pickerelweeds & <u>Salvinia</u>. Only one pickerelweed plant was blooming--perhaps stimulated from effluent from septic tanks?

- 19 Large curve to the right (large exotic malvaceous shrub resembling Cocoloba on curve). Then a sharp curve to the left with a point bar containing willows and mixed marsh species.

 Blechnum serrulatum grew along the shore.
- 20 After a sharp curve to the right, a larger slough enters from the right. Popash grows densely in its mouth and also back a ways, with a fringe of willows, blue paspalum, and other vegetation. QV-SP continues along left side. Water locust (Gleditsia aquatica) along shore; first sighting of that species. It grows with buttonbush (Cephalanthus occidentalis). The terrain along the left side drops into a low hammock of PE, QV, SP.
- 21 Power line visible 200 yards ahead. A slough enters from the left with much popash. High banks on the right. There's a slight point bar on the right, just downstream of the power line.
- 22 A slough enters from the right with popash growing in its mouth. Shorelines contain bulrush, willows, <u>Sagittaria</u> <u>lancifolia</u>, and a marsh dominated by blue paspalum.

Later, we entered that slough on the right--actually an oxbow. Encountered a dense floating mat of sterile pickerelweeds, in which <u>Salvinia</u> and <u>Scirpus</u> <u>cubensis</u> were mixed.

23 Curving left, with a slough entering from the right.

Later, we explored the oxbow on the right. After 100 feet or so, we were stopped by a dense floating mat of sterile pickerelweed, which also contained <u>Salvinia</u> and <u>Scirpus cubensis</u>. This covered at least 2 acres. At the point bar at the river we collected a coarse panicum (sterile) that had the growth form of paragrass.

24 Rather high bank on the left, soon droping into low terrain bearing a hammock of QV, SP, and a little PE.

Later, we entered the slough to the right at the downstream end of the segment. It was broad, open, pond-like. Willows on the edge and QV-SP just behind them. Patches of bulrush and Myriophyllum. The slough curved until it paralleled the river. Soon, the entire slough was covered with a dense floating mat of sterile pickerelweeds, in which were mixed Salvinia and Scirpus cubensis, both floating. This mat covered 2 or 3 acres.

25 In the downstream portion of this segment, there is a large slough entering from the left. There is a marshy shoreline with bulrush, Rumex, Mikania, and some Blechnum. Then there is higher ground with a campsite along the left bank, visible in the color-IR aerial photo. The right side has a very high bank (10 feet) at the upstream end of this segment. This is the so-called "pipeline crossing." A slough enters from the right. Curves to the right.

Later we entered the broad slough to the left. Up 75 or 100 feet from the river we encountered a dense floating mat of pickerelweeds, all sterile and knee-high, resembling water hyacinths. Much <u>Salvinia</u> floating among the pickerelweeds. The pickerelweeds occupied an entire channel about 150 feet wide and curved around for about 200 yards towards the pipeline crossing area. The pickerelweed was crimson on the color-IR aerial photo.

- 26 High bank on right side. Low hammock on left side.
- 27 Two broad sloughs with popash growing in them enter from the right.
- 28 Open water. Low hammock on either side of PE-QV-SP. Steep slopes 10 feet high on left and 4 or 5 feet on right. Some were spoil banks from channelizing. Stopped by barb wire fence across slough.
- 29 On both sides a low-lying hammock of QV-SP-PE. A marsh on the left shore contains bulrush, smartweed (<u>Polygonum</u>), and some royal fern. The terrain is more elevated on the right side farther upstream. A stream enters from the left, and its mouth contains willows and bulrush. A broad curve to the right.
- 30 A stream enters from the right with a little popash growing in it. Then a point bar on the right side with willows on it.

31 High bank on the left side with an exposed stratum of oyster shells. Terrain is low on the right side.

32 Terrain gets higher on the right side with SR growing to the edge and much PE in the forest behind. A slough enters from the left on a curve. On the right is a point par containing woods of QV-SP.

Later we went up a slough thought to be in this segment. It had steep sides with SR growing on them. First we took the left fork, which had rather open water. Popash grew on shore, also Polygonum, bulrush. Much popash further up, also willow, Mikania, a gallery of QV, and SR-QV-SP on taller banks. Then we returned and went up the right fork of the slough. It was a straight and narrow chute back into the river. It contained Coreopsis, water locust, buttonbush, popash.

- 33 A large slough enters from the right with willows in its mouth and open water behind.
- 34 A house on the left bank. A narrow slough enters from the left with a few popash growing in its mouth. A couple more houses appear along the left bank. Low banks on either side contain popash. A small slough enters on the left with willows in its mouth.
- 35 A very sharp curve to the right. Buttonbush on the left shore. Shores contain much willow and marsh vegetation.

Later, we went up a slough, thought to be in this segment, on the right side. It was broad and contained much popash. It extended 200 yards. The water was 100-150 feet across at flood stage. Much popash. Polygonum along the edges. The slough curved left, paralleling the main river stem and became thick with willows, also an extensive stand of dense popash along the side nearest the main stem of the river.

The last houses upstream on the river were just downstream of this slough. The furtherest upstream stations were about here for bulrush (\underline{S} . $\underline{validus}$) and blue paspalum (\underline{P} . $\underline{caespitosum}$).

36 Gentle curve to the left, with a large slough enetering from the right and popash in its mouth. Marshy shorelines.

Later, we went up a slough, thought to be in this segment, on the right side. 30 feet wide. Much willow and buttonbush and some popash and water locust. The slough extended behind the levee of the main river and was galleried by overhanging trees. There was a steep bank with SR.

37 Broad curve to the left with bars along either side of the river containing willows and some water locusts.

38 A slough enters from the left and contains dense popash.

39 Right bank has SR growing nearly to its edge. A narrow (50-100 ft) flood plain in front of this bank contains laurel oak (Quercus laurifolia) and QV. A slough enters from the right. Further upstream in this segment, SR grows to the edge of the high bank. The left shoreline has much willow and a slough entering.

Later, we went up a slough thought to be in this segment. It was fairly open, 30 feet wide, with some buttonbush and a gallery of laurel oak and QV. Mikania, Vigna. Left bank was steep. About 200 feet up the slough from the river the terrain broadened into a flooded flat about 200 feet wide and covered by buttonbush, water locust, willows, and SP.

- 40 Going around a sharp curve to the left. On both shores, much popash, willow, water locust.
- 41 Left side contains a laurel oak hammock with some SP. This extends a ways to the interior on a flood plain. On the right side, a low flood plain contains laurel oak, popash, some SP, and ends abruptly about 150 feet to the interior at a bank containing SR. Willows grow on the shoreline. Further upstream on the straight reach is a laurel oak hammock with undergrowth of popash and water locust. At the upstream end there is a steep bank on the right with SR and scrubby QV.

Later, we hiked through the laurel oak hammock on the left side. The overstory was shared with elm (<u>Ulmus americana</u>), which was nearly as common as laurel oak but not nearly as conspicuous as laurel oak from the river. High understory of SP. The land was much dissected with meander scars and abandoned sloughs. The sloughs were mostly up to about 25 feet wide and contained small trees of willows, water locust, popash, buttonbush, some <u>Ilex decidua</u>. <u>Psychotria nervosa</u> was present. A pond (oxbow?) was filled with water and popash and did not show on the aerial photo, although it occupied about one acre, because it was galleried by the oak-elm canopy.

- 42 A sharp curve to the left with a willow bar on the right. An island. Laurel oak hammock on the flood plain, both sides.
- 43 Willows common on both shores. The laurel oak hammock continues on the low flood plain. SP is scattered; popash undergrowth. Then willows occupy the flood plain on the right. Go around curve to the right.
- 44 A small slough enters from the left. Willows grow at its point. Then a straight reach.
- **45** A slough enters from the left with popash growing in its mouth. On the right side the low, broad flood plain contains a laurel oak hammock.

- 46 A straight reach with a high bank on the left containing SR to the edge and an open QV hammock with some SP.
- 47 Willows, water locust on both shores. Terrain gets higher on the right side. Left side drops into low hammock of QV-SP and some SR.
- 48 Both sides have much SR growing with QV and SP.
- 49 A slough enters from the left with buttonbush abundant in its mouth.
- 50 Both sides have hammock of QV-SP. SR grows on right side to the water's edge. At Rocky Ford. A road extends to both sides.
- 51 Curving left, a gauging station. Much SP on left side.
- 52 On the left, a large, mesic forested flat with much SP and some QV. Slough enters from the left with largely open water in its mouth. On the right side is a low laurel oak hammock.
- 53 A sharp curve to the right. A narrow slough enters from the left and angles back.
- 54 In the downstream reach, a low hammock flanks both sides on narrow banks. Remains low on left side with QV-SP hammock. Rises on right side and SR appears; few QV, PE. Then high hammock on both sides with SR nearly to both edges. A stream enters from the right.
- 55 A slough enters from the left with willows in its mouth. A narrow reach of river with high banks. SR on the right. Curves to the left.
- 56 On the left a low hammock of laurel oak. On the right, SR grows nearly to the edge. A slough enters from the left.
- 57 Curves left. Right bank is high, with SR and scattered QV. Flood plain on left has laurel oak, SP, water locust.
- 58 Large slough enters from the right with popash growing in it. A high hammock of QV occupies a broad flat on the left. This hammock extends to the interior about 300 feet, where it stops at a bank containing SR.
- **59** Curve to the right. A point bar on the right is forested with QV and laurel oak. On the left is a large hammock of SP. A broad curve to the right.
- 60 Straight reach with a deep flood plain on the right, containing mixed QV and laurel oak with SP forming a tall undergrowth. On the left is a flood plain forested by laurel oak and SP. Curves to the left. A narrow (10') slough enters from

the right and contains popash. Continue curving left. The low but well drained flood plain to the left contains much SP and little QV. SP and QV is also on the right side, but the land become lower and popash becomes more common. A small slough enters from the left.

- **61** Curve right, and narrow sloughs enter from both sides. Continuing to curve right, a large slough enters from the left; much popash swamp. The flood plain on the left side still has much SP, but hardwoods have become more common.
- 62 Curve to the left. Flood plains on both sides contain laurel oak and SP. Tripsacum patch seen.
- 63 An island at the end of Segment 62. Curving right into a straight reach. Slough enters on right side. The right side flood plain has much laurel oak that extends interior for 300 feet. Continues without much change through segment 67.
- 65 Flood plain either side. Much laurel oak on right side and much SP on the left side. A slough enters at the downstream end and is overhung by a gallery of QV.
- 67 Broad flood plain on the left side with laurel oak hammock. On the right side is mixed QV and laurel oak with SP beneath.
- 68 On right side, a scrubby QV forest with much SR grows to the edge. Shore contains <u>Eustachys</u>. The low flood plain continues on the left, with much SP and some laurel oaks in the forest. A slough enters from the right in downstream reach of this segment, and it is galleried by QV but shows up on the color-IR aerial photo.
- **69** As river curves left, a slough enters from the right and is covered entirely by a gallery of overhanging trees. On the left side, SR grows to the shore, and oaks grow no closer than 50 feet from the river.
- 70 Approaching a broad curve to the right. A small point bar 6 feet wide contains marshy vegetation. A short straight reach has a small slough entering from the right. Broad curve to the left. The broad flood plain on the left side contains laurel oak hammock with some SP. On the right, the flood plain contains QV and SP. Shore has a patch of pickerelweed.
- 71 A staight reach with a continuation of the same flood plain forest on the left, with much SP. On the right is our first sighting of paragrass (<u>Brachiaria mutica</u>). It grows next to a road crossing and an aerial photography target. Willow, popash, and water locust grow on the shores. A gentle right curve, then a straight reach with a low flood plain on either side, containing laurel oak hammock.

- 72 Curving left, with low, broad flood plain on both sides, clothed with laurel oak, QV, SP hammock. Tripsacum patch.
- 73 Broad, sharp curve to the right. Gallery of large willows extending into the next segment. Small slough enters from right.
- 74 Short straight reach with more broad low flood plain with much laurel oak, some QV, and tall undergrowth SP.
- 75 Curve to the left. Flood plain either side. On right side, the forest is laurel oak and SP. Sharp curve to the left.
- 76 Long straight reach with willows on shores. Laurel oak hammock on left side. Higher bank on right side with recently burned forest and damaged trees; SR to the edge.
- 77 Burned woods and SR extend a short wasy into this segment. River widens around a narrow island containing laurel oaks. Flats on both sides contain popash and willow on shores and laurel oak hammock on the left side. Curving a little to the left, then a straight reach with much popash on the right.
- 78 Sharp curve to the right. On the left side, a low hammock of QV-SP. On the right is an even lower hammock of laurel oak and SP. Transect site 1-1.
- 79 Steep curve to the left. Willows on the point. Right side is a flood plain with laurel oak hammock. A slough enters from the right with popash growing in it. A gallery of taller trees cover the slough. On the left the terrain is a little higher and contains QV-SP hammock.
- 80 Curve sharply to the right. Slough enters from the left. Gauging station on the left. Then a point bar.
- 81 Dam in view. Slough enters from the left 150 yards downstream from dam. We hike through the forest in the vicinity of Transect 1, about 100 feet south of dam on the right side. It is a broad flat flood plain dominated by laurel oak also containing scattered SP. Some sloughs run through the flat and are lined with popash. Much paragrass on the shoreline of the river.

Part B Benthic Species List

Table 1. Myakka River Benthos, April and September 1989.

Date	Station	Taxa	_ 1	2	3	4	5	6	Total
4/13/8	39 1a	IMM. TUBIFICIDAE SP. W/O	84	67	90	53	116	72	482
4/13/8	39 1a	POLYPEDILUM HALTERES	11	11	16	12	67	23	140
4/13/8	39 1a	HYALELLA AZTECA	10	20	5	4	39	34	112
4/13/8	39 1a	CLADOTANYTARSUS SP.	2	5	12	2	61	29	111
4/13/8	39 1a	DICROTENDIPES NEOMODUSTUS	9	25	8	12	29	25	108
4/13/8	39 1a	TANYTARSUS SP.	7	27	13	35	5	21	108
4/13/8	39 1a	LIMNODRILUS HOFFMEISTERI	10	1	21	0	22	18	72
4/13/8	39 1a	CRYPTOTENDIPES SP.	1	4	4	4	12	10	35
4/13/8	39 1a	DERO DIGITATA	5	3	1	4	15	5	33
4/13/8	39 1a	PROCLADIUS NR. ADUMBRATUS	4	5	5	7	5	4	30
4/13/8	39 1a	PARACHIRONOMUS ABORTIUS/HIRTALATU	3	2	3	4	15	0	27
4/13/8	39 1a	CRYPTOCHIRONOMUS FULVUS	5	2	4	2	8	2	23
4/13/8	39 1a	ABLABESMYIA MALLOCHI	0	3	0	1	4	5	13
4/13/8	39 1a	PODOCOPA SP.	0	0	0	8	3	0	11
4/13/8		PRISTINA LEIDYI	3	0	0	0	3	1	7 '
4/13/8		PRISTINA AEQUISETA	0	0	0	0	6	0	6
4/13/8		PARALAUTERBORNIELLA NIGROHALTERALIS	0	0	1	1	2	2	6
4/13/8		CHIRONOMUS SP.	2	0	2	0	0	0	4
4/13/8		DERO TRIFIDA	O	1	0	0	3	0	4
4/13/8		LABRUNDINIA NEOPILOSELLA	0	0	0	1	2	1	4
4/13/8		ABLABESMYIA PARAJUNTA	1	Ó	0	0	3	0	4
4/13/8		ANCYLIDAE SP.	2	0	0	0	1	0	3
4/13/8		PROMENETUS EXACUOUS	ō	0	0	1	0	2	3
4/13/8		THIENEMANNIELLA SP. (DAM)	0	Ó	0	2	0	1	3
4/13/8		CERATOPOGONIDAE SP.	Ō	Ö	Ō	1	Ō	2	3
4/13/8		CORYNONEURA TARIS	Ō	Ō	Ō	Ò	2	1	3
4/13/8		PLANORBELLA DURYI	1	1	Ó	Ô	Ö	0	2
4/13/8		PRISTINA SYNCLITES	Ó	Ó	0	0	2	Ó	2
4/13/8		SPHAERIUM PARTUMEIUM	Ō	Ò	1	0	0	0	1
4/13/8		PHYSELLA SP.	0	0	0	0	0	1	1
4/13/8		DERO FLABELLIGER	0	1	0	0	0	0	1
4/13/8		IMM. TUBIFICIDAE SP. W	Ō	Ó	0	0	1	0	1
4/13/8		AULODRILUS PIGUETI	Ō	Ô	0	Ó	0	1	1
4/13/8		DERO VAGA	1	0	0	0	0	0	1
4/13/8		TANYTARSUS SP.	1	0	0	0	0	0	1
4/13/8		NOTOPHILINAE SP.	1	0	0	0	0	0	1
4/13/8		POLYPEDILUM CONVICTUM	0	0	1	0	0	0	1
4/13/8		TANYTARSUS (PUPAE)	0	0	0	1	0	0	1
4/13/8			0	0	0	1	0	0	1
4/13/8		MICROTENDIPES PEDELLUS GP.	0	0	0	1	0	0	1
4/13/8		ZAVRELIMYIA SP.	1	0	0	0	0	0	1
4/13/8		CRICOTOPUS SP.	Ó	0	0	0	1	0	1
4/13/8		PSEUDOCHIRONOMUS SP.	Ō	Ō	0	0	1	0	1
4/13/8		SLAVINA APPENDICULATA	0	0	0	0	1	0	1
4/13/8		CLADOPELMA SP.	0	0	0	0	1	0	1
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4/13/8	39 1b	CLADOTANYTARSUS SP.	37	148	41	16	98	30	370
4/13/8		IMM. TUBIFICIDAE SP. W/O	26	22	11	43	31	29	162
4/13/8		POLYPEDILUM HALTERES	33	31	6	15	35	14	134
4/13/8		PODOCOPA SP.	14	27	2	0	70	9	122
4/13/8	39 1b	TANYTARSUS SP.	3	22	21	12	41	6	105
4/13/8		CRYPTOTENDIPES SP.	3	25	1	16	51	6	102
4/13/8		DICROTENDIPES NEOMODUSTUS	3	24	29	6	30	10	102
4/13/8		HABER SPECIOSUS	25	28	0	0	21	14	88
4/13/8	39 1b	CRYPTOCHIRONOMUS FULVUS	10	9	5	4	13	6	47
4/13/8	39 1b	LIMNODRILUS HOFFMEISTERI	15	7	1.	5	14	3	45

Table 1. Myakka River Benthos, April and September 1989.

Date	Statio	on Taxa	1	2	3	4	5	6.	Total
4/13/		PRISTINA SYNCLITES	1	_	0	6	9	6	28
4/13/		ABLABESMYIA MALLOCHI	1		0	0	9	1	11
4/13/		PSEUDOCHIRONOMUS SP.	5		0	1	1	3	10
4/13/		ANCYLIDAE SP.	0	-	3	0	4	0	8
4/13/		HYALELLA AZTECA	1	_	0	2	3	2	8
4/13/		SPHAERIUM PARTUMEIUM	1	_	0	0	0	0	6
4/13/		DERO DIGITATA	0	•	0	0	2	0	. 6
4/13/		CERATOPOGONIDAE SP.	6	-	0	0	0	0	6
4/13/		ABLABESMYIA PARAJUNTA NILOTHAUMA SP.	0	-	2	0	2 2	0	5 4
4/13/ 4/13/		CRICOTOPUS SP.	. 0		0	0	3	2 0	
4/13/		LAEVAPEX FUSCUS	. 0		Ö	0	2	0	3
4/13/		MICROTENDIPES PEDELLUS GP.	0	-	Ö	0	1	1	2 2
4/13/		PARACHIRONOMUS SP.	0		. 2	0	Ö	Ó	2
4/13/		MENETUS SAMPSONI	0	-	õ	ő	1	Ö	1
4/13/		BRATISLAVIA UNIDENTATA	0		0	Ö	1	0	i
4/13/		PARALAUTERBORNIELLA NIGROHALTERALIS	0	_	Ö	ŏ	Ö	0	i
4/13/		OECETIS SP.	ō	-	ő	Ö	1 -	ŏ	1
4/13/		PHAENOPSECTRA FLAVIPES	Ö		Ö	ŏ	1	Ö	i
4/13/		PEDIONOMUS BECKAE	ő		Ö	Ö	i	Õ	· i
4/13/		PROCLADIUS NR. ADUMBRATUS	Ô		ő	ő	i	ő	i
4/13/		NANNOCLADIUS MINIMUS	Õ	. 0	ŏ	Ō	i	Ō	i
			,	-					•
4/13/		IMM. TUBIFICIDAE SP. W/O	49		48	18	81	27	260
4/13/		POLYPEDILUM HALTERES	86	39	39	20	18	17	219
4/13/8		PODOCOPA SP.	41	18	8	30	33	50	180
4/13/8		CRYPTOTENDIPES SP.	21	20	29	22	21	35	148
4/13/8		DICROTENDIPES NEOMODUSTUS	21	22	19	7	7	6	82
4/13/8 4/13/8		TANYTARSUS SP. CLADOTANYTARSUS SP.	7 7	12	8 11	6 28	13 4	27 0	73 51
4/13/8		HYALELLA AZTECA	12	5	1	1	16	10	45
4/13/8		CERATOPOGONIDAE SP.	0		10	5	21	3	39
4/13/		LIMNODRILUS HOFFMEISTERI	6	2	5	3	10	1	27
4/13/8		PROCLADIUS NR. ADUMBRATUS	3	5	4	. 1	3	5	21
4/13/8		NILOTHAUMA SP.	4	4	1	2	2	5	18
4/13/8		CRICOTOPUS SP.	1	2	3	5	4	3	18
4/13/8		CRYPTOCHIRONOMUS FULVUS	7	1	4	4	1	1	18
4/13/8		ABLABESMYIA MALLOCHI	3	3	4	0	2	5	17
4/13/8		GAMMARUS PALUSTRIS	0	0	1	0	12	0	13
4/13/8		SPHAERIUM PARTUMEIUM	1	0	0	1	0	8	10
4/13/8	39 1c	SLAVINA APPENDICULATA	0	0	1	1	2	5	9
4/13/8	39 ·1c	PARALAUTERBORNIELLA NIGROHALTERALIS	0	0	1	.2	4	0	7
4/13/8		DERO DIGITATA	1	. 0	3	0	0 .	2	6
4/13/8		PRISTINA SYNCLITES	1	, . 1	0	1	2	1	6
4/13/8		PRISTINA LEIDYI	0	1	1	0	0	3	5
4/13/8		NANNOCLADIUS MINIMUS	2	1	0	0	0	2	5
4/13/8		PSEUDOCHIRONOMUS SP.	1	0	0	2	0	2	5
4/13/8		ANCYLIDAE SP.	1	0	0	0	2	1	4
4/13/8		PLANORBIDAE SP.	0	0	0	0	4	0	4
4/13/8 4/13/8		MICROTENDIPES PEDELLUS GP. PLANORBELLA DURYI	0 2	. 0	2 0	0 0	0 ·1	2 0	4
4/13/8		MENETUS SAMPSONI	0	0	0	0	2	1	3
4/13/8		PHYSELLA SP.	0	0	0	0	1	2	3 3
4/13/8		AULODRILUS PIGUETI	1	1	0	- 0	Ó	1	3
4/13/8		ABLABESMYIA PARAJUNTA	1	Ó	0	0	1	i	3
4/13/8		LARSIA SP.	Ö	Ö	1	Ö	Ö	2	3
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Table 1. Myakka River Benthos, April and September 1989.

Date	Statio	n Taxa		1	2	3	4	5	6	Total
4/13/	89 1c	PEDIONOMUS BECKAE		0	0	1	0	1	1	3
4/13/		LAEVAPEX FUSCUS		0	0	0	0	2	0	2
4/13/8	89 1c	PRISTINA AEQUISETA		0	1	0	1	0	0	2
4/13/		ECLIPIDRILUS PALUSTRIS	•	0		1	0	0	0	2
4/13/8		COELOTANYPUS SP.		1	0	0	0	1	0	2
4/13/8		PARACHIRONOMUS ARCUATUS GP.		0	1	1	0	0	0	2
4/13/8		LABRUNDINIA JOHANNSENI		0	0	0	0	2	0	2
4/13/8		HEBETANCYLUS EXENTRICUS		0	1	0	0	0	0	1
4/13/8		ELLIPTIO BUCKLEYI		0	0	1	0	0	0	1
4/13/8		IMM. TUBIFICIDAE SP. W		0	1	0	0	0	0	1
4/13/8		TANYTARSINI SP.		0	0	0				1
4/13/8		BRATISLAVIA UNIDENTATA STENOCHIRONOMUS SP.		0	0	0	0	0	1	
4/13/8				0	Ó	0	0	1	0	1
4/13/8 4/13/8		OECETIS SP. CÉRATOPOGONIDAE SP.		0	0	0	0	0	1	1
4/13/8		ASTACIDAE SP.		0	0	0	0	1	0	1
4/13/0	39 1c	ASTACIDAE SP.		U	U	U	U	1	U	1
4/ 7/8		POLYPEDILUM HALTERES		24	63	88		146		630
4/ 7/8		IMM. TUBIFICIDAE SP. W/O	I	52	60	30		113		567
4/ 7/8		TANYTARSUS SP. PODOCOPA SP.		63	55 74	166 92	66 114	41	86	477
4/ 7/8		CLADOTANYTARSUS SP.		9 26	0	1		57 149	98 175	444 351
4/ 7/8		SPHAERIUM PARTUMEIUM		26	59	38	62	78	63	326 ⁻
4/ 7/8		CRYPTOTENDIPES SP.		30	20	38	0	21	54	163
4/ 7/8		LIMNODRILUS HOFFMEISTERI		49	4	1	12	15	30	111
4/ 7/8		CORBICULA MANILIENSIS		24	15	15	14	15	17	100
4/ 7/8		DICROTENDIPES NEOMODUSTUS		21	6	25	7	6	32	97
4/ 7/8		CRYPTOCHIRONOMUS FULVUS		13	5	1	23	9	4	55
4/ 7/8		PRISTINA AEQUISETA		5	Ō	3	1	27	18	54
4/ 7/8		PRISTINA SYNCLITES		14	4	3	1	16	15	53
4/ 7/8		CERATOPOGONIDAE SP.		2	0	Ō	2	20	0	24
4/ 7/8		HABER SPECIOSUS		3	9	Ŏ	3	3	2	20
4/ 7/8		PARALAUTERBORNIELLA NIGROHALTERALIS		1	2	1	0	5	10	19
4/ 7/8		PSEUDOCHIRONOMUS SP. A		1	1	1	1	6	5	15
4/ 7/8	39 2a	ABLABESMYIA MALLOCHI		1	2	3	1	5	3	15
4/ 7/8	39 2a	NANNOCLADIUS MINIMUS		0	0	11	3	0	0	14
4/ 7/8	39 2a.	CERATOPOGONIDAE SP.		0	8	6	0	0	0	14
4/ 7/8		ABLABESMYIA PARAJUNTA		2	2	7	1	0	0	12
4/ 7/8		CRICOTOPUS SP.		0	0	4	1	2	4	11
4/ 7/8		HYALELLA AZTECA		2	0	2	2	1	3	10
4/ 7/8		CRUSTIPELLIS TRIBRINCHIATUS		0	2	5	1	0	1	9
4/ 7./8		SLAVINA APPENDICULATA		0	0	3	0	0	4	7
4/ 7/8		PRISTINA LEIDYI		0	0	2	1	0	3	6
4/ 7/8		MENETUS SAMPSONI		0	1	3	1	0	0	5
4/ 7/8		NAIS PARDALIS		0	0	0 4	0	5 0	0	5
4/ 7/8		DERO DIGITATA		0	1	2	0	_	0	5
4/ 7/8		PROSTOMA RUBRUM CHIRONOMUS SP.		0 2	0	2	2	0	0	4
4/ 7/8 4/ 7/8		PROCLADIUS NR. ADUMBRATUS		0	0	2	0	0	0	4 3
4/ 7/8		ELLIPTIO BUCKLEYI		1	0	ő	0	0	1	2
4/ 7/8		HIRUDINEA SP. (JUV)		٥	2	0	0	0	. 0	2
4/ 1/8		DUBIRAPHIA SP.		0	0	0	2	0	. 0	2
4/ 7/8		ORTHOTRICHIA SP.		0	1	1	0	0	0	2
4/ 7/8		OECETIS SP.		0	Ó	2	0	0	ő	2
4/ 7/8		PLANORBIDAE SP.		1	ő	0	ő	0	0	1
4/ 7/8		HEBETANCYLUS EXENTRICUS		ò	1	Õ	0	Ö	ŏ	i
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Table 1. Myakka River Benthos, April and September 1989.

Date	s	tatio	n Taxa		1	2	3	4	5	6	Total
4/	7/89	4c	NAIS COMMUNIS		0	0	0	1	0	0	1
	7/89		SLAVINA APPENDICULATA		Ö	0	Ō	Ó	Ō	1	1.
	7/89	4c	DICROTENDIPES NEOMODUSTUS		1	0	0	0	0	0	1
4/	7/89	5a	IMM. TUBIFICIDAE SP. W/O		23	25	19	34	29	39	169
	7/89	5a	NAIS PARDALIS		6	28	12	12	27	11	96
	7/89		PODOCOPA SP.		3	10	15	15	18	32	93
	7/89	5a	CLADOTANYTARSUS VANDERWULPI	GP	7	20	_	. 3	9	11	56
	7/89	5a	GAMMARUS PALUSTRIS	u	4	7	2	8	10	17	48
	7/89		LIMNODRILUS HOFFMEISTERI		6	7	7	11	5	10	46
	7/89		PSEUDOCHIRONOMUS SP.		3	8	4	1	10	12	38
	7/89		TANYTARSUS SP.		7	5	10	3	4	0	29
	7/89	5 a	POLYPEDILUM HALTERES		6	4.	Ö	1	ō	5	16
-	7/89	5a	TAPHROMYSIS BOWMANI		2	0	4	3	. 2	Ö	11
	7/89	5a	PRISTINA SYNCLITES		ō	ő	0	ő	2	1	3
	7/89	5a	ABLABESMYIA MALLOCHI		ŏ	1	ő	2	ō	ó	3
	7/89	5a	ABLABESMYIA PARAJUNTA		Ö	ó	ő	Õ	. 2	1	3
	7/89		HABER SPECIOSUS		0	2	ő	0	. 0	Ö	
	7/89	5a	CRYPTOCHIRONOMUS FULVUS		0	0	1	0	.0	1	2 2
	7/89	5 a	DERO DIGITATA		0	0	0	Ö	1	0	1
	7/89	5a 5a	STEMPELLINA SP.		0	1	0	0	Ó	0	1
	7/89		ORTHOCLADIINAE SP. (DAM)		0	Ó	0	0	1	Ö	i
	7/89	_	DICROTENDIPES NEOMODUSTUS		0	0	0	0	Ö	1	1
	7/89	5a			0	0	0	0	0	1	1
4/	1/09	5a	HYALELLA AZTECA		U	U	U	U	U	į	'
	7/89	5b	TANYTARSUS SP.		21	10	. 7	14	32	7	91
	7/89	5b	IMM. TUBIFICIDAE SP. W/O		23	21	7	8	7	2	68
	7/89	5 b	NAIS PARDALIS		10	1	6	5	20	2	44
	7/89	5b	LIMNODRILUS HOFFMEISTERI		13	0	4	9	5	5	36
	7/89	5b	PODOCOPA SP.		6	10	3	4	10	0	33
	7/89	5 b	POLYPEDILUM HALTERES		3	1	2	3	2	2	13
	7/89	5b	CRYPTOTENDIPES SP.		2	1	1	1	7	0	12
	7/89	5b	PSEUDOCHIRONOMUS SP.		2	3	2	1	2	. 0	10
	7/89	5b	CLADOTANYTARSUS SP.		1	0	1	2	4	0	8
	7/89	5 b	PRISTINA SYNCLITES		1	0	0	3	0	0	4
	7/89	5b	GAMMARUS PALUSTRIS		0	2	1	0	0	1	4
	7/89		HABER SPECIOSUS		0	. 2	0	1	0	0	3
	7/89	5 b	DERO DIGITATA		0	0	1	2	0	0	3
	7/89	5b	CRYPTOCHIRONOMUS FULVUS		0	0	2	0	1		3
	7/89	5b	HARNISCHIA SP.		0	0	1	0	1	0	2
	7/89	5b	STICTOCHIRONOMUS SP.		0	0	0	0	1		2
	7/89	5b	CERATOPOGONIDAE SP.		1	0	0	0	0	0	
	7/89		AULODRILUS PIGUETI		. 0	0	0	1	0	0	1
4/	7/89	5b	STEMPELLINA SP.		0	0	1	0	0	0	1
4/	7/89	5c	IMM. TUBIFICIDAE SP. W/O		124	38	21	69	52	41	345
	7/89	5c	NAIS PARDALIS		5	12	1	41	18	24	101
	7/89	5c ·	LIMNODRILUS HOFFMEISTERI		15		0	7	8	4	38
	7/89	5c	CLADOTANYTARSUS VANDERWULPI	GP.	1	3	0	5	4	4	17
4/	7/89	5c	PRISTINA SYNCLITES		4	3	1	3	3	1	15
	7/89	5c	PSEUDOCHIRONOMUS SP.		0	0	0	5	4	2	11
	7/89		HABER SPECIOSUS		0	2	1	1	1	0	5
	7/89		CRYPTOCHIRONOMUS FULVUS		0	2	0	2	1	0	5
	7/89		PRISTINA AEQUISETA		.1	0	0	2	0	0	3
	7/89		CRYPTOTENDIPES SP.		0	2	0	0	0	0	2
4/	7/89	5c	TANYTARSUS SP.	•	0	1	0	0	0	4	-2

Table 1. Myakka River Benthos, April and September 1989.

Date	Statio	n Taxa	1	2	3	4	5	6	Total
4/13/	89 2c	CERATOPOGONIDAE SP.	38	0	21	0	15	4	78
4/13/1	89 2°C	CLADOTANYTARSUS SP.	6	3	18	28	16	1	72
4/13/		PRISTINA SYNCLITES	44	0	3	0	1	1	49
4/13/		LIMNODRILUS HOFFMEISTERI	5	3	7	3	11	18	47
4/13/		HABER SPECIOSUS	2	0	4	6	23	3	38
4/13/		ABLABESMYIA PARAJUNTA	6	9	0	5	3	8	31
4/13/		POLYPEDILUM HALTERES	14	0	0	5	1	1	21
4/13/		CRICOTOPUS SP.	4	0	0	2	10	0	16
4/13/0 4/13/0		CRYPTOTENDIPES SP.	9 2	0	1	6 10	0	0	16
4/13/		DICROTENDIPES NEOMODUSTUS AULODRILUS PIGUETI	0	0	1	12	0	1	15 14
4/13/1		PENTANEURA SP.	0	4	1	5	3	Ö	13
4/13/		HYALELLA AZTECA	0	1	ó	Ő	7	3	11
4/13/8		ELLIPTIO BUCKLEYI	3	1	1	1	i	1	8
4/13/8		LAEVAPEX FUSCUS	2	Ò	ò	2	i	2	7
4/13/8		ABLABESMYIA MALLOCHI	4.	2	Ŏ	ō	Ö	ō	6
4/13/		SLAVINA APPENDICULATA	1	0	1	1.	1	1	5
4/13/8		PRISTINA LEIDYI	1	0	0	0	0	4	5
4/13/		NANNOCLADIUS MINIMUS	3	0	0	0	2	0	5
4/13/8	89 2c	HEBETANCYLUS EXENTRICUS	3	0	0	1	0	0	4
4/13/8	89 2c	NAIS PARDALIS	2	. 0	2	Ō	0	0	4
4/13/8		PROSTOMA RUBRUM	0	0	1	0	0	2	3
4/13/		PARALAUTERBORNIELLA NIGROHALTERALIS	1	0	0	2	0	0	3 1
4/13/8		BIOMPHALARIA GLABRATA	. 0	0	0	0	1	1	2
4/13/8		ANCYLIDAE SP.	0	0	′0	0	0	2	2
4/13/8		HELOBDELLA TRISERIALIS	0	0	0	0	2	0	2
4/13/8		BRATISLAVIA UNIDENTATA	0 1	0	0	0	1	1 0	2
4/13/8 4/13/8		CRYPTOCHIRONOMUS FULVUS DUBIRAPHIA SP.	0	0	0	0	1	0	2 2
4/13/8		OECETIS SP.	0	0	i	0	1	0	2
4/13/8		STENOCHIRONOMUS SP.	0	Ö	Ö	2	Ö	0	2
4/13/8		PSEUDOCHIRONOMUS SP. A	ĭ	ā	0	1	ő	Ö	. 2
4/13/8		GYRAULUS PARVUS	i	Õ	ō	ò	ŏ	. 0	1
4/13/8		PLANORBELLA DURYI	Ó	1	Ō	Ô	Õ	0	1
4/13/8		MENETUS SAMPSONI	0	0	0	0	0	1	1
4/13/8	39 2c	PARACHIRONOMUS SP.	1	0	0	0	0	0	1
4/13/8	89 2c	POLYPEDILUM CONVICTUM	0	Ó	1	0	0	0	1
4/13/8	39 2c	ASTACIDAE SP.	0	0	0	0	1	0	1
4/ 7/8		PODOCOPA SP.	21	52	59	37		101	285
4/ 7/8		IMM. TUBIFICIDAE SP. W/O	98	89	28	18	4	21	258
4/ 7/8		LIMNODRILUS HOFFMEISTERI	2	17 5	22	11 6	4	9	65 63
4/ 7/8 4/ 7/8		HABER SPECIOSUS CLADOTANYTARSUS VANDERWULPI GP.	20 12	4	10 7	6	8	13 28	62 57
4/ 1/8		TANYTARSUS SP.	11	3	10	11	3	0	38
4/ 7/8		NAIS PARDALIS	9	2	3	Ö	2	19	35
4/ 7/8		PRISTINA SYNCLITES	17	5	2	1	2	1	28
4/ 7/8		POLYPEDILUM HALTERES	8	7	2	1	ō	Ö	18
4/ 7/8		PSEUDOCHIRONOMUS SP.	3	1	5	0	1	6	16
4/ 7/8		ABLABESNYIA MALLOCHI	1	2	1	5	0	4	13
4/ 7/8	89 3a	HYALELLA AZTECA	0	0	1	8	.3	1	13
4/ 7/8		CRYPTOCHIRONOMUS FULVÚS	2	0	3	2	0	3	10
4/ 7/8		SLAVINA APPENDICULATA	0	0	1	2	. 2	3	8
4/ 7/		CRYPTOTENDIPES SP.	2	1	0	3	0	1	7
4/ 7/8		ABLABESMYIA PARAJUNTA	0	1	0	3	-1	0	5
4/ 7/	89 3a	PENTANEURA SP.	. 0	0	. 0	4	1	0	5

Table 1. Myakka River Benthos, April and September 1989.

Date	S	tatio	n Taxa	1	2	3	4	5	6	Total
4/	7/89	3a	CERATOPOGONIDAE SP.	0		3	. 0	0	0	3
4/	7/89	3a	ECLIPIDRILUS PALUSTRIS	. 1	0	1	0	0		2
			AULODRILUS PIGUETI	. 1	1	0	0	0		2
	7/89		DEMICRYTOCHIRONOMUS SP.	1	0	0		0		2
	7/89		PRISTINA AEQUISETA	1		0	0	0		. 1
	7/89		NAIS COMMUNIS	0	0	0	1	0		1
	7/89		LUMBRICULUS VARIEGATUS	0		0	1	0		1
	7/89		DERO TRIFIDA	0		0	1	0		1
	7/89 7/89		DERO DIGITATA PRISTINA LEIDYI	0	0	0	1	0	0	1
	7/89		BRYCHIUS SP.	. 0	0	0	ò	.0	1	1
	7/89		STENOCHIRONOMUS SP.	1	Ö	ő	Ö	Ō	ò	i
			LABRUNDINIA PILOSELLA	Ö	Õ	Ō	0	ō	1	1
	7/89		RHEOTANYTARSUS SP.	0	0	0	a	0	1	1
7/	1,03	Ju	TATESTANT PARCOS SI :	·	Ŭ	·	Ŭ	·	•	•
	7/89		HABER SPECIOSUS	57		60	23	52		. 265
	7/89		CLADOTANYTARSUS VANDERWULPI GP.	50		47	35	33	46	252
	7/89		IMM. TUBIFICIDAE SP. W/O	23		19	12	15	14	91
	7/89		LIMNODRILUS HOFFMEISTERI	8	0	4	4	3		26
	7/89		POLYPEDILUM HALTERES	1		7	3	3	3	20
	7/89		NAIS PARDALIS	4	4	2	2			17
	7/89		PSEUDOCHIRONOMUS SP.	1 2	1 5	. 3	2	6 3		17 17
	7/89 7/89		PENTANEURA SP. PODOCOPA SP.	2	. 5	1 2	3	0	3	11
	7/89		ABLABESMYIA MALLOCHI	1		0	0	3	2	6
	7/89		DICROTENDIPES NEOMODUSTUS	Ó	3	2	0	0	1	6
	7/89		CRYPTOCHIRONOMUS FULVUS	1.	1	1	1	Ö	1	5
	7/89		TANYTARSUS SP.	ó	ò	Ö	2	ŏ	i	5 3
	7/89	3b	SLAVINA APPENDICULATA	0	Ö	Õ	2	Ŏ	Ó	2
	7/89		PRISTINA SYNCLITES	2	0	0	0	0	0	2 2 1
	7/89		PROSTOMA RUBRUM	Ō	. 0	0	1	0	0	1
	7/89	3b	AULODRILUS PIGUETI	0	0	0	1	0	0	1
	7/89	3b	NAIS COMMUNIS	0	1	0	0	0	0	1
4/	7/89	3b	NILOTHAUMA SP.	1	0	0	0	0	0	1
4/	7/89	3b	DUBIRAPHIA SP.	0	1	0	0	0	0	1
4/	7/89	3b	CRYPTOTENDIPES SP.	0	. 0	0	0	1	0	1
4/	7/89	3c	PODOCOPA SP.	44	325	76	257	161	416	1279
			IMM. TUBIFICIDAE SP. W/O		70	119	95	88	107	
	7/89	3с	TANYTARSUS SP.	11	66	15	35	24	58	209
	7/89	3c	PRISTINA SYNCLITES	3	59	12	26	27	54	181
	7/89		LIMNODRILUS HOFFMEISTERI	13	24	28	26	38	15	144
	7/89		POLYPEDILUM HALTERES	17	17	7	9	11	31	92
	7/89		PRISTINA LEIDYI	1	4	21	14	24	23	87
	7/89 . 7/00		HYALELLA AZTECA	. 0	27	0	6	6	16	55 47
	7/89 7/89		AULODRILUS PIGUETI CRYPTOTENDIPES SP.	0 4	0 10	0	8 13	4 8	35 8	47 46
	7/89		ABLABESMYIA PARAJUNTA	1	13	0	2	8	9	33
	7/89		CLADOTANYTARSUS SP.	6	3	3	9	8	2	31
	7/89		ABLABESMYIA MALLOCHI	Ô	8	1	7	2	12	30
	7/89		PSEUDOCHIRONOMUS SP.	Ö	4	3	8	7	3	25
	7/89		NAIS AEQUISETA	0	0	.0	2	11	11	24
4/	7/89	3c	NAIS PARDALIS	5	2	3	9	1	3	23
	7/89		HABER SPECIOSUS	4	1	4	1	2	1	13
	7/89		SLAVINA APPENDICULATA	0	1	2	4	5	1	13
4/	7/89	3c	DICROTENDIPES NEOMODUSTUS	0	5	1	4	0	. 3	13

Table 1. Myakka River Benthos, April and September 1989.

Date	St	atio	n Taxa	1	2	. 3	4	5	6	Total
4/	7/89	3c	CRICOTOPUS SP.	0	- 2	0	1	3	4	10
	7/89		DERO DIGITATA	0	0	1	` 3	0	2	6
	7/89	3с	STENOCHIRONOMUS SP.	0	4	0	0	2	0	6
	7/89	3c	CRYPTOCHIRONOMUS FULVUS	1	0	0	0	1	1.	3
4/	7/89	3c	DERO TRIFIDA	0	. 0	2	0	0	0	2
4/	7/89	3c	PARALAUTERBORNIELLA NIGROHALTERALIS	1	1	0	0	0	0	2
4/	7/89	3с	NAIS ELINGUIS	0	0	Ó	0	0	1	1
4/	7/89	3с	LUMBRICULUS VARIEGATUS	0	0	0	0	0	1	1
4/	7/89	3¢	RHEOTANYTARSUS SP.	0	0	1	0	0	0	1
4/	7/89	3c	ORTHOCLADIINAE SP.	0	0	0	1	0	0	t
4/	7/89	3¢	PHAENOPSECTRA FLAVIPES	0	0	0	0	1	0	1
4/	7/89	3c	LARSIA SP.	0	0	0	0	0	1	1
4/	7/89	4a	CLADOTANYTARSUS VANDERWULPI GP.	53	48	41	54	49	88	333
4/	7/89	4a	IMM. TUBIFICIDAE SP. W/O	7	17	23	21	24	23	115
4/	7/89	4a	NAIS PARDALIS	26	5	11	8	16	36	102
4/	7/89	4a	POLYPEDILUM. HALTERES	9	8	9	15	11	27	79
4/	7/89	4a	LIMNODRILUS HOFFMEISTERI	2	13	11	7	11	6	50
4/	7/89	4a	CRYPTOCHIRONOMUS FULVUS	1	4	2	3	9	6	25
4/	7/89	4a	HABER SPECIOSUS	1	3	2	1	3	6	16
4/	7/89	4a	PSEUDOCHIRONOMUS SP.	0	5	2	1	1	4	13
4/	7/89	4a	PRISTINA SYNCLITES	0	0	5	0	2	0	7
	7/89		PODOCOPA SP.	2	0	1	0	2	1	6
	7/89		TANYTARSUS SP.	1	0	0	0	0	4	5
	7/89		PENTANEURA SP.	.0	0	1	0	0	2	3 2
	7/89	4a	PRISTINA AEQUISETA	1	0	0	0	0	1	2
	7/89	4a	SLAVINA APPENDICULATA	0	0	0	0	0	2	2
	7/89		CHIRONOMIDAE SP. (DAM)	0	0	0	0	0	1	1
	7/89		DUBIRAPHIA SP.	0	0	1	0	0	0	1
	7/89		ABLABESMYIA MALLOCHI	0	0	0	1	0	0	1
	7/89	4a	CRICOTOPUS SP.	0	0	0	0	0	1	1
4/	7/89	4a	HYALELLA AZTECA	0	0	. 0	0	0	1	1
4/	7/89	4b	CLADOTANYTARSUS SP.	12	9	25	47	18	27	138
		4b	NAIS PARDALIS	13	9	13	31	22	32	120
4/	7/89	4b	POLYPEDILUM HALTERES	2	1	4	8	1	10	26
4/	7/89	4b	HABER SPECIOSUS	4	2	2	9	1	7	25
4/	7/89	4b	CRYPTOCHIRONOMUS FULVUS	5	2	3	2	5	5	22
4/	7/89	4b	IMM. TUBIFICIDAE SP. W/O	1	1	3	4	1	5	15
	7/89	4b	PSEUDOCHIRONOMUS SP.	1	1	3	8	1	1	15
	7/89	4b	PODOCOPA SP.	1	2	2	7	0	2	14
	7/89	4b	PRISTINA SYNCLITES	4	1	3	1	0	1	10
	7/89		LIMNODRILUS HOFFMEISTERI	0	1	1	5	2	1	10
	7/89	4b	CHIRONOMINI SP. (DAM)	1	0	0	0	0	0	1
4/	7/89	4b	ABLABESMYIA PARAJUNTA	0	0	1	0	0	0	1
4/	7/89	4c	NAIS PARDALIS	9	92	23	54	2	15	195
4/	7/89	4c	CLADOTANYTARSUS VANDERWULPI GP.	22	32	22	67	6	12	161
	7/89	4c	POLYPEDILUM HALTERES	13	9	12	30	0	5	69
	7/89	4c	HABER SPECIOSUS	1	13	1	19	1	20	55
	7/89	4c	CRYPTOCHIRONOMUS FULVUS	6	3	7	19	2	10	47
	7/89	4c	IMM. TUBIFICIDAE SP. W/O	2	20	2	9	1	7	41
	7/89	4c	LIMNODRILUS HOFFMEISTERI	3	3	0	1	1	2	10
	7/89		PRISTINA SYNCLITES	0	4	2	2	1	1	10
	7/89	4c	PSEUDOCHIRONOMUS SP.	0	0	1	5	1	0	7
4/	7/89	4c	PODOCOPA SP.	0	1	0	1	, 1	1	4

Table 1. Myakka River Benthos, April and September 1989.

Date	S	tatio	n Taxa		1	2	3	4	5	6	Total
4/	7/89	4c	NAIS COMMUNIS		0	0	0	1	0	0	1
			SLAVINA APPENDICULATA		0	0	0	0	0	1	1.
4/	7/89	4c	DICROTENDIPES NEOMODUSTUS		1	0	0	0	0	0	1
	7/89	5 a	IMM. TUBIFICIDAE SP. W/O		23	25	19	34	29		169
	7/89		NAIS PARDALIS		6	28		: 12	27	11	96
4/	7/89	5a	PODOCOPA SP.		3	10	15	15	18	32	93
4/	7/89	5a	CLADOTANYTARSUS VANDERWULPI GP.		7	20	6	3	9	11	56
4/	7/89	5a	GAMMARUS PALUSTRIS		4	7	2	8	10	17	48
	7/89		LIMNODRILUS HOFFMEISTERI		6 3 7	7	7	11	5	10	46
	7/89		PSEUDOCHIRONOMUS SP.		3	8	4	1		12	38
	7/89		TANYTARSUS SP.			5	10	3	4	0	29
	7/89		POLYPEDILUM HALTERES		6	4		1	0	5	16
	7/89		TAPHROMYSIS BOWMANI		2	0	4.	` 3 0	2	0	11
	7/89		PRISTINA SYNCLITES		0	0	0	2	2 0	1	3
	7/89		ABLABESMYIA DABA HINTA		0	1	0	0	2	0	
	7/89	5a	ABLABESMYIA PARAJUNTA		0	2	0	0	0	Ö	3
	7/89 7/89		HABER SPECIOSUS CRYPTOCHIRONOMUS FULVUS		0	0	1	0	0	1	3 3 2 2
	7/89		DERO DIGITATA	_	0	0	Ö	0	1	Ó	1
	7/89		STEMPELLINA SP.		Ö	1	ő	0	ó	0	1
	7/89		ORTHOCLADIINAE SP. (DAM)		Ö	ó	0	Ö	1	Ö	1
	7/89		DICROTENDIPES NEOMODUSTUS		ŏ	ő	ŏ	ő	Ö	1	i
	7/89		HYALELLA AZTECA		ŏ	Ö	ŏ	ŏ	Ö	i	i
	7/89	5b	TANYTARSUS SP.		21	10	7	14	32	7	91
	7/89		IMM. TUBIFICIDAE SP. W/O		23	21	7	8	7	2	68
	7/89		NAIS PARDALIS		10	1	6	5	20	2	44
	7/89		LIMNODRILUS HOFFMEISTERI	**	13	0	4	9	5	5	36
	7/89		PODOCOPA SP.		6	10	3	4	10	0	33
	7/89		POLYPEDILUM HALTERES		3 2	1	2 1	3 1	2 7	2 0.	13 12
4/	7/89 7/89		CRYPTOTENDIPES SP. PSEUDOCHIRONOMUS SP.		2	3	2	1	2	0.	10
	7/89		CLADOTANYTARSUS SP.		1	0	1	2	4	Ö	8
	7/89		PRISTINA SYNCLITES		1	ő	Ö	3	ō	ŏ	4
	7/89		GAMMARUS PALUSTRIS		Ö	2	1	0.	Õ	1	4
	7/89		HABER SPECIOSUS		Ŏ	2	Ö	1	Ö	Ó	3
			DERO DIGITATA		Ö	ō	1	2	Ō.	Ō	3
	7/89		CRYPTOCHIRONOMUS FULVUS		0	0	2	0	1	0	3
	7/89	5b	HARNISCHIA SP.		0	0	1	0	1	0	2
	7/89	5b	STICTOCHIRONOMUS SP.		0	0	0	0	1	1	2
	7/89		CERATOPOGONIDAE SP.		. 1	0	0	0	0	0	. 1
	7/89		AULODRILUS PIGUETI		0	0	0	1		0	1
4/	7/89	5b	STEMPELLINA SP.		0	0	1	0	0	0	1
4/	7/89	5c	IMM. TUBIFICIDAE SP. W/O		124	38	21	69	52	41	345
	7/89	5c	NAIS PARDALIS		5	12	1	41	18	24	101
	7/89		LIMNODRILUS HOFFMEISTERI		15	4	0	7	8	4	38
	7/89		CLADOTANYTARSUS VANDERWULPI GP.		1	3	0	5	4	4	17
	7/89		PRISTINA SYNCLITES		4	3	1	3	3	1	15
	7/89		PSEUDOCHIRONOMUS SP.		0	0	0	5	4	2	11
	7/89 7/80		HABER SPECIOSUS		0	2	1	1	1	0	5
	7/89 7/89		CRYPTOCHIRONOMUS FULVUS PRISTINA AEQUISETA		0	2 0	0	2	1	0	5 3
	7/89		CRYPTOTENDIPES SP.		0	2	0	0	0	0	2
	7/89		TANYTARSUS SP.		Ó	1	0	0	0	1	2
••	.,	- •			.•	•	•	•	•	•	-

Table 1. Myakka River Benthos, April and September 1989.

4/ 7/89 5c PODOCOPA SP. 4/ 7/89 5c GLYCINDE SOLITARIA 0 1 0 0 0 0 0 1 1 4/ 7/89 5c DERO DIGITATA 0 0 0 0 0 0 1 1 4/ 7/89 5c STEMPELLINA SP. 0 0 0 0 0 0 0 1 1 4/ 7/89 5c STEMPELLINA SP. 0 0 0 0 0 0 1 1 4/ 7/89 5c STEMPELLINA SP. 0 0 0 0 0 0 1 1 4/ 6/89 6a IMM. TUBIFICIDAE SP. W/O 82 34 95 229 73 157 670 4/ 6/89 6a IMM. TUBIFICIDAE SP. W/O 82 34 95 229 73 157 670 4/ 6/89 6a PRISTINA SYNCLITES 17 38 30 211 28 89 413 4/ 6/89 6a PRISTINA SYNCLITES 17 38 30 211 28 89 413 4/ 6/89 6a PRISTINA SYNCLITES 18 9 7 11 14 25 84 4/ 6/89 6a PRISTINA SYNCLITES 19 7 36 14 13 106 4/ 6/89 6a PRISTINA SYNCLITES 19 7 11 14 25 84 4/ 6/89 6a PRISTINA SYNCLITES 10 6 3 3 88 3 14 113 10 6/89 6a CAMMANUS PALUSTRIS 10 7 10 1 1 1 2 2 5 84 4/ 6/89 6a CAMMANUS PALUSTRIS 10 8 21 7 2 9 1 14 80 4/ 6/89 6a CAMMANUS PALUSTRIS 10 8 21 7 2 9 1 14 80 4/ 6/89 6a CREDOCOLIROHOMUS SP. 10 6 3 40 5 20 74 4/ 6/89 6a CREDOCOLIROHOMUS SP. 10 6 3 40 5 20 74 4/ 6/89 6a CREDOCOLIROHOMUS SP. 11 1 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Date	St	ation	Taxa	1	2	3	4	5	6	Total
4/ 7/89 5C DERO DIGITATA 4/ 7/89 5C TAPHROMYSIS BOWMANI 0 0 0 0 0 0 1 1 4/ 7/89 5C TAPHROMYSIS BOWMANI 0 0 0 0 0 0 1 1 1 4/ 6/89 6a INM. TUBIFICIDAE SP. W/O 4/ 6/89 6a NAIS PARDALIS 17 38 30 211 28 89 413 4/ 6/89 6a PRISTIMA SYNCLITES 4 19 21 76 18 69 207 4/ 6/89 6a PRISTIMA SYNCLITES 2 3 3 88 3 14 113 106 4/ 6/89 6a POLYPEDILUM HALTERES 2 3 3 88 3 14 113 107 4/ 6/89 6a PODOCOPA SP. 18 9 7 11 14 25 84 4/ 6/89 6a PODOCOPA SP. 18 9 7 11 14 25 84 4/ 6/89 6a CANDOTOLINE HOFFMEISTERI 17 17 93 61 41 13 106 4/ 6/89 6a TANYTARSUS SP. 0 6 5 3 40 5 20 74 4/ 6/89 6a CRICOTOPUS SP. 1 4 1 6 1 10 23 4/ 6/89 6a CRICOTOPUS SP. 1 5 1 1 8 3 21 4/ 6/89 6a CRICOTOPUS SP. 1 6 1 1 1 1 5 1 5 14 4/ 6/89 6a DERO DIGITATA 1 1 1 5 1 5 1 5 14 4/ 6/89 6a DERO DIGITATA 1 1 1 5 1 5 1 5 14 4/ 6/89 6a DERO DIGITATA 1 1 1 5 1 5 1 5 14 4/ 6/89 6a DERO DIGITATA 1 1 1 5 1 5 1 5 14 4/ 6/89 6a DERO DIGITATA 1 1 1 5 1 5 1 5 14 4/ 6/89 6a DERO DIGITATA 1 1 1 5 1 5 1 5 14 4/ 6/89 6a PRISTIMA ELIDYI 1 0 5 0 2 0 2 0 2 0 2 0 2 4/ 6/89 6a PRISTIMA ELIDYI 1 0 5 0 2 0 2 0 2 0 2 0 2 4/ 6/89 6a PRISTIMA ELIDYI 1 0 5 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					0	1	1	0	0	0	2
4/ 7/89 5C STEMPELLINA SP. 4/ 7/89 5C TAPHROWYSIS BOWMANI 0 0 0 0 0 0 1 1 4/ 6/89 6a INN, TUBIFICIOAE SP. W/O 82 34 95 229 73 157 670 4/ 6/89 6a INN, SYNCLITES 17 38 30 211 28 89 413 4/ 6/89 6a PRISTINA SYNCLITES 17 38 30 211 28 89 413 4/ 6/89 6a PRISTINA SYNCLITES 18 9 121 76 18 69 207 4/ 6/89 6a CLIMMODRILUS HOFFMEISTERI 17 17 9 36 14 13 106 4/ 6/89 6a CAMMARUS PALUSTRIS 18 9 7 11 14 25 84 4/ 6/89 6a GAMMARUS PALUSTRIS 18 9 17 7 29 1 14 80 4/ 6/89 6a CRYPTOTENDIPES SP. 18 9 7 11 14 25 84 4/ 6/89 6a CRYPTOTENDIPES SP. 0 6 3 40 5 20 74 4/ 6/89 6a CRYPTOTENDIPES SP. 0 7 3 5 24 4 7 33 4/ 6/89 6a CLADOTANYTARSUS SP. 0 7 4 6 8 6 6 CLADOTANYTARSUS VANDERWULPI GP. 1 4 1 6 1 10 23 4/ 6/89 6a DERO TRIFIDA 1 5 1 1 5 5 14 4/ 6/89 6a DERO TRIFIDA 1 6 1 1 1 5 5 5 0 2 0 2 2 4/ 6/89 6a PRISTINA LEIDVI 1 5 6 8 PRISTINA LEIDVI 1 6 8 6 8 PRISTINA LEIDVI 1 5 6 8 6 RICHYTRAEIDAS SP. 1 6 8 6 PRISTINA LEIDVI 1 5 5 0 2 0 2 2 2 4/ 6/89 6a CAMBRES PECIOSUS 1 6 6 8 CHICHYRAEIDAS SP. 1 7 8 8 30 21 7 29 1 14 8 9 7 11 14 8 9 8 1 8 18 1 7 29 1 1 1 8 3 2 8 1 1 1 1 5 5 1 4 8 1 6/89 6a CAMBRES PECIOSUS 1 6 6 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6											
4/ 7/89 5c TAPHROMYSIS BOWMANT											
4/ 6/89 6a IMM. TUBIFICIDAE SP. W/O 4/ 6/89 6a MAIS PARDALIS 5/ 6/89 6a PRISTINA SYNCLITES 5/ 6/89 6a PRISTINA SENDERWULPI GP. 5/ 6/89 6a CRYPTOTENDIPES SP. 6/ 6/89 6a CRYPTOTENDIPES SP. 7/ 6/89 6a CRYPTOTENDIPES SP. 7/ 6/89 6a CLADOTANYTARSUS VANDERWULPI GP. 7/ 6/89 6a CLADOTANYTARSUS VANDERWULPI GP. 7/ 6/89 6a DERO TRIFIDA 7/ 6/89 6a DERO TRIFIDA 7/ 6/89 6a PRISTINA LEIDYI 7/ 6/89 6a PRISTINA AEQUISETA 7/ 6/89 6a PRISTIPELLIS TRIBRINCHIATUS 7/ 6/89 6a PRISTINA SENDONOUSTUS 7/ 6/89 6b PRISTINA SENDONOUS SP. 7/ 6/89 6b PRISTINA SPRICTUS SP. 7/ 6/89 6b PRISTINA SPRICTUS SP. 7/ 6/89 6b PRISTINA SPRICTUS SP. 7/ 6/89 6b PRISTINA AEQUISETA 7/ 6/89 6b PRISTINA AEQUISETA 7/ 6/89 6b PRISTINA AEQUIS											
4	4/	1/89	5C	TAPHROMYSIS BUWMANI	U	U	U	U	U		1
4											
4/ 6/89 6a POLYPEDILUM HALTERES 2 3 3 88 3 14 113 106 4/ 6/89 6a PINMODRILUS HOFFMEISTERI 17 17 9 36 14 13 106 4/ 6/89 6a PODOCOPA SP. 18 9 7 11 14 25 84 4/ 6/89 6a GAMMARUS PALUSTRIS 8 21 7 29 1 14 80 4/ 6/89 6a CANTYARSUS SP. 0 6 3 40 5 20 74 4/ 6/89 6a CRYPTOTENDIPES SP. 0 6 3 40 5 20 74 4/ 6/89 6a PRISTINA SP. 0 2 1 25 0 6 34 4/ 6/89 6a PRISTINA SP. 1 4 1 6 1 10 23 4/ 6/89 6a CRYPTOTENDIPES SP. 1 4 1 6 1 10 23 4/ 6/89 6a CRYPTOTENDIPES SP. 1 4 1 6 1 10 23 4/ 6/89 6a CLADDIANYTARSUS VANDERWULPI GP. 5 3 1 1 8 3 21 1 4/ 6/89 6a DERO DIGITATA 1 1 1 1 5 1 5 1 4/ 6/89 6a DERO DIGITATA 1 1 1 1 5 1 5 1 5 14 6/89 6a PRISTINA LEIDYI 0 5 0 2 0 2 0 2 9 4/ 6/89 6a PRISTINA LEIDYI 0 5 0 2 0 2 0 2 9 4/ 6/89 6a PRISTINA LEIDYI 0 5 0 2 0 2 0 2 9 4/ 6/89 6a PRISTINA LEIDYI 0 5 0 0 2 0 2 0 2 9 4/ 6/89 6a PRISTINA LEIDYI 0 5 0 0 2 0 3 0 0 0 6 6/ 6/89 6a PRISTINA LEIDYI 0 5 0 0 2 0 3 0 0 6 6/ 6/89 6a PRISTINA LEIDYI 0 5 0 0 2 0 3 0 0 6 6/ 6/89 6a PRISTINA LEIDYI 0 5 0 0 2 0 3 0 0 6 6/ 6/89 6a PRISTINA LEIDYI 0 5 0 0 2 0 3 0 6 6/ 6/89 6a PRISTINA LEIDYI 0 5 0 0 0 0 1 0 5 6 6/ 6/89 6a PRISTINA LEIDYI 0 0 0 0 0 1 0 5 6 6/ 6/89 6a PRISTIPELLIS TRIBRINCHIATUS 0 0 0 0 1 0 5 6 6/ 6/89 6a CRYPTOCHENDIPES NEOMODUSTUS 0 1 1 1 0 0 0 3 0 3 0 3 0 0 6 6/ 6/89 6a PRISTIPELLIS TRIBRINCHIATUS 0 0 0 0 1 0 5 6 6/ 6/89 6a PRISTISLAYA UNIDENTATA 0 0 0 0 0 1 0 1 0 2 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0											
4/ 6/89 6a LIMIODRILUS HOFFNEISTERI 17 17 9 36 14 13 106 4/ 6/89 6a PODOCOPA SP. 18 9 7 11 14 25 84 4/ 6/89 6a CAMMARUS PALUSTRIS 8 21 7 29 1 14 80 4/ 6/89 6a CAMMARUS PALUSTRIS 8 21 7 29 1 14 80 4/ 6/89 6a CRYPTOTENDIPES SP. 0 3 5 24 4 7 43 4/ 6/89 6a PSEUDOCHTRONOMUS SP. 0 2 1 25 0 6 34 6/89 6a CRICOTOPUS SP. 1 4 1 6 1 10 23 4/ 6/89 6a CRICOTOPUS SP. 1 4 1 6 1 10 23 4/ 6/89 6a DERO DIGITATA 1 1 1 5 1 5 14 6/ 6/89 6a DERO TRIFIDA 0 2 0 8 0 0 10 4/ 6/89 6a DERO TRIFIDA 0 2 0 8 0 0 0 10 4/ 6/89 6a PRISTINA AEQUISETA 0 3 0 4 0 1 8 6/89 6a PRISTINA AEQUISETA 0 3 0 4 0 1 8 6/89 6a PRISTINA AEQUISETA 0 3 0 4 0 1 1 0 6 6/89 6a CRUCHTRANDIS SP. 0 1 0 2 0 3 0 0 6 6/ 6/89 6a CRUCHTRANDIS SP. 0 1 0 0 0 0 1 0 5 6 6/ 6/89 6a PRISTINA AEQUISETA 0 3 0 0 0 6 6/ 6/89 6a CRUSTIPELLIS TRIBRINCHIATUS 0 3 0 0 0 6 6/ 6/89 6a PRISTINA SPECIOSUS 4 0 1 1 0 0 5 6 6/ 6/89 6a PRISTINA SPECIOSUS 4 0 1 1 0 0 5 6 6/ 6/89 6a PRISTINA SPECIOSUS 4 0 1 1 0 0 5 6 6/ 6/89 6a PRISTINA SPECIOSUS 4 0 1 1 0 0 5 6 6/ 6/89 6a PRISTINA SPECIOSUS 4 0 1 1 0 0 5 6 6/ 6/89 6a PRISTINA SPECIOSUS 4 0 1 1 0 0 5 6 6/ 6/89 6a PRISTINA SPECIOSUS 4 0 1 1 0 0 5 6 6/ 6/89 6a PRISTINA SPECIOSUS 4 0 1 1 0 0 5 6 6/ 6/89 6a PRISTINA SPECIOSUS 5 0 0 0 0 0 1 0 0 0 3 3 0 0 0 6 6/ 6/89 6a PRISTINA SPECIOSUS 5 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0											
4/ 6/89 6a PODCOCPA SP. 18 9 7 11 14 25 84 4/ 6/89 6a GAMMARUS PALUSTRIS 8 21 7 29 1 14 80 4/ 6/89 6a TANYTARSUS SP. 0 6 3 40 5 20 74 6/89 6a PARTONOMUS SP. 0 2 1 25 0 6 3 34 6 6 20 74 6/89 6a PESUDOCHIRONOMUS SP. 0 2 1 25 0 6 3 34 6 6 20 6 20 6 2 1 25 0 6 6 3 4/ 6/89 6a CLADOTANYTARSUS VANDERWULPI GP. 5 3 1 1 8 3 21 7 2 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1											
4/ 6/89 6a TANYTARSUS PALUSTRIS 4/ 6/89 6a TANYTARSUS SP. 0 6 3 40 5 20 74 4/ 6/89 6a CRYPTOTENDIPES SP. 0 0 3 5 24 4 7 43 4/ 6/89 6a PSEUDOCHIRONOMUS SP. 1 1 4 1 6 1 10 23 4/ 6/89 6a CLADOTANYTARSUS VANDERWULPI GP. 5 3 1 1 8 3 21 4/ 6/89 6a DERO DIGITATA 1 1 1 5 1 5 1 5 4/ 6/89 6a DERO DIGITATA 1 1 1 5 5 1 5 5 4 4 6 7 8 6 6 PRISTINA LEIDYI 6/89 6a PRISTINA LEIDYI 7 6/89 6a PRISTINA LEIDYI 8 6/89 6a HABER SPECIOSUS 8 1 0 1 1 0 0 6 6/ 6/89 6a RAIS COMMUNIS 8 0 3 0 3 0 0 6 6/ 6/89 6a CRUSTIPELLIS TRIBRINCHIATUS 9 0 1 0 2 0 3 6 6/ 6/89 6a CRUSTIPELLIS TRIBRINCHIATUS 9 0 1 0 2 0 3 6 6/ 6/89 6a DICROTENDIPES NEOMODUSTUS 9 0 1 0 1 0 5 6 6/ 6/89 6a PARAKIEFFERIELLA SP. 9 0 0 0 0 1 0 0 0 1 0 0 6/ 6/89 6a SALVINA APPENDICULATA 9 0 1 0 1 0 0 0 0 0 0 6/ 6/89 6a SALVINA APPENDICULATA 9 0 1 0 0 0 0 0 0 0 0 0 6/ 6/89 6a SALVINA APPENDICULATA 9 0 0 0 0 0 0 0 0 0 0 6/ 6/89 6a SALVINA APPENDICULATA 9 0 0 0 0 0 0 0 0 0 0 0 6/ 6/89 6a SALVINA APPENDICULATA 9 0 0 0 0 0 0 0 0 0 0 0 0 6/ 6/89 6a SALVINA APPENDICULATA 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0											
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4/ 6/89 6b CLADOTANYTARSUS SP. 0 0 4 2 8 4 18 4/ 6/89 6b CERATOPOGONIDAE SP. 0 3 1 0 5 1 10 4/ 6/89 6b PRISTINA AEQUISETA 0 1 0 2 5 0 8 4/ 6/89 6b PROCLADIUS NR. ADUMBRATUS 1 0 2 4 0 0 7 4/ 6/89 6b HARNISCHIA SP. 0 0 0 3 2 2 7 4/ 6/89 6b STEMPELLINA SP. 0 1 0 1 3 1 6 4/ 6/89 6b GAMMARUS PALUSTRIS 1 1 1 0 2 1 6			6b	CRYPTOCHIRONOMUS FULVUS	4	5					26
4/ 6/89 6b CERATOPOGONIDAE SP. 0 3 1 0 5 1 10 4/ 6/89 6b PRISTINA AEQUISETA 0 1 0 2 5 0 8 4/ 6/89 6b PROCLADIUS NR. ADUMBRATUS 1 0 2 4 0 0 7 4/ 6/89 6b HARNISCHIA SP. 0 0 0 3 2 2 7 4/ 6/89 6b STEMPELLINA SP. 0 1 0 1 3 1 6 4/ 6/89 6b GAMMARUS PALUSTRIS 1 1 1 0 2 1 6											
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4/ 6/89 6b GAMMARUS PALUSTRIS 1 1 1 0 2 1 6											
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				ABLABESMYIA PARAJUNTA	Ö	2	i	ő	· 1	i	5

Table 1. Myakka River Benthos, April and September 1989.

Date	;	Statio	n Taxa		2	3	4	5	6	Tota1
4/	6/89	6b	ABLABESMYIA MALLOCHI	0	0	1	1	2	1	. 5
	6/89		TAPHROMYSIS BOWMANI	. 2	0	1	2	0	0	5
	6/89		CRICOTOPUS SP.	0	1	1	1	1	0	4
	6/89		AULODRILUS PIGUETI	0	2	0	0	1	0	3
	6/89		NAIS COMMUNIS	0	0	0	0	3	0	3
	6/89	6b	NILOTHAUMA SP.	0	1	0	0	0	2	. 3
	6/89	6b	DICROTENDIPES NEOMODUSTUS	0	0	0	0	1	2	: 3
	6/89	6b	DERO TRIFIDA	0	0	1	0	0	1	
	6/89		HABER SPECIOSUS	0	0	0	0	2	0	2 2
	6/89		COELOTANYPUS SP.	0	0	0	1	0	1.	2
	6/89		CRUSTIPELLIS TRIBRINCHIATUS	0	0	0	1	0	0	1
	6/89	6b	PARALAUTERBORNIELLA NIGROHALTERALIS	0	1	0	0	0	0	1
4/	6/89	6c	IMM. TUBIFICIDAE SP. W/O	31	109	73	193	90	83	579
4/	6/89	6c	POLYPEDILUM SP.	10	21	28	49	34	80	222
4/	6/89	6c	LIMNODRILUS HOFFMEISTERI	31	18	17	25	20	26	137
4/	6/89	.6c	NAIS PARDALIS	1	31	28	35	7	17	119
4/	6/89	6c	PRISTINA SYNCLITES	18	34	. 7	17	9	10	95
4/	6/89	6c	CLADOTANYTARSUS VANDERWULPI GP.	1	2	9	5	5	21	43
4/	6/89	6c	PSEUDOCHIRONOMUS SP.	0	1	7	9	0	10	27
4/	6/89	6c	PODOCOPA SP.	2	1	7	0	1	13	24
4/	6/89	6c	TANYTARSUS SP.	0	3	1	14	0	2	20
4/	6/89	6c	CRYPTOTENDIPES SP.	2	1	4	3	2	2	14 1
	6/89	6c	DICROTENDIPES NEOMODUSTUS	0	1	1	0	9	1	12
	6/89	6c	CRYPTOCHIRONOMUS FULVUS	2		0	0	1	6	11
	6/89		CRICOTOPUS SP.	Ō	0	1	0	1	6	8
	6/89		PRISTINA LEIDYI	Ō	1	0	1	Ó	1	3
	6/89	6c	PRISTINA AEQUISETA	Ō	Ó	0	2	Ō	1	3
	6/89		HABER SPECIOSUS	1	Ō	0	Õ	1	0	2
	6/89		AULODRILUS PIGUETI	0		0	1	0	1	
	6/89		ENCHYTRAEIDAE SPP	0	0	0	2	0	0	2 2
	6/89		TAPHROMYSIS BOWMANI	0	0	2	0	Ō	0	2
	6/89		CERATOPOGONIDAE SP.	1	1	0	0	0	0	2 2 2
	6/89	6c	ABLABESMYIA PARAJUNTA	0	2	0	0	0	. 0	2
	6/89	6c '	LAEONEREIS CULVERI	0	0	0	1	0	0.	1
	6/89		DERO DIGITATA	0	0	0	0	0	1	1
	6/89		GAMMARUS PALUSTRIS	0	0	1	0	0	0	1
	6/89		PARALAUTERBORNIELLA NIGROHALTERALIS	1	0	0	0	0	0	1
	6/89		STEMPELLINA SP.	0	0	1.		0	0	1
4/	6/89	7 a	POLYPEDILUM HALTERES	19	34	55	32	41	54	235
	6/89	7 a	IMM. TUBIFICIDAE SP. W/O	35	39	57	24	25	27	207
4/	6/89	7 a	LIMNODRILUS HOFFMEISTERI	29	45	52	24	19	37	206
4/	6/89	7 a	GAMMARUS PALUSTRIS	18	- 15	21	11	25	13	103
4/	6/89	7 a	CLADOTANYTARSUS SP	6	5	4	5	8	17	45
	6/89		TANYTARSUS SP.	5	6	6	0	8	7	32
	6/89		NAIS PARDALIS	1	0	3	2	2	15	23
	6/89		PRISTINA SYNCLITES	. 0	3	8	2	0	3	16
	6/89		CRYPTOCHIRONOMUS FULVUS	0	1	4	4	3	2	14
	6/89		PODOCOPA SP.	, 0	2	0	0	5	3	10
	6/89		CRYPTOTENDIPES SP.	1	0	2	0	2	5	10
	6/89		HYALELLA AZTECA	1	1	2	. 0	0	0	4
	6/89		SPHAEROMA SP.	. 1	2	1	0	0	0	4
	6/89		ABLABESMYIA PARAJUNTA	2	1	0	- 1	0	0	4
	6/89		CRICOTOPUS SP.	0	0	3	0	1	0	4
4/	6/89	7a	DICROTENDIPES NEOMODUSTUS	0	.1	2	0	0	0	3

Table 1. Myakka River Benthos, April and September 1989.

Date	s	tatio	n Taxa		1	2	3	4	5	6	Total
4/	6/89	7a	DERO DIGITATA		0	0	0	1	0	1	2
	6/89	7a	COELOTANYPUS SP.		0	1	1	0	0	0	2
4/	6/89	7a	ENCHYTRAEIDAE SP.		1	0	0	0	0	0	1
4/	6/89	7 a	CERATOPOGONIDAE SP.		0	0	0	0	0	1	1
	6/89	7 a	HABER SPECIOSUS	•	0	0	0		0	1	1 .
	6/89	7 a	TAPHROMYSIS BOWMANI	•	0	0	0		1	0	1
4/	6/89	7a	TALTRIDAE SP.		0	0	0	0	0	1	1
	6/89	7b	LIMNODRILUS HOFFMEISTERI		0	1	4	4	6	7	22
	6/89	7b	GAMMARUS PALUSTRIS		0	. 0	3	3	4	9	19
	6/89	7b	IMM. TUBIFICIDAE SP. W/O		3	1	1	4	7	1	17
	6/89		TANYTARSUS SP.		0	0	2	2	10	0	14
	6/89	7b	CLADOTANYTARSUS SP.		1	0	2	2	3	1	9
	6/89	7b	CRYPTOCHIRONOMUS FULVUS		1	1	0	2	2	2	8
	6/89	7b	PSEUDOCHIRONOMUS SP.		1	0	2	0	3	2	. 8
	6/89	7b	POLYPEDILUM HALTERES		1	1	0	0	2	3	7
	6/89	7b	GRANDIDIERELLA BONNIEROIDES		0	0	0	2	1	3	6
	6/89	7b	HABER SPECIOSUS		3	. 0	1	0	0	0	4
	6/89		CRYPTOTENDIPES SP.		0	0	1	0	1	2	4
	6/89	7b	PRISTINA SYNCLITES		1	0	0	0	1	0	2
	6/89	7b	PODOCOPA SP.		0	0	0	1	0	0	1
	6/89	7b	MYSIDOPSIS FURCA		0	0	0	0	0	1	1
	6/89 6/89	7b 7b	HARNISCHIA SP. CRICOTOPUS SP.		1	0	0	0	0	0	1 1
						-					•
	6/89	7c	IMM. TUBIFICIDAE SP. W/O						202		1236
	6/89	7c	NAIS PARDALIS		176			211		. 9	744
	6/89	7 c	CLADOTANYTARSUS SP.		99	60		240	83	24	568
	6/89	7c	POLYPEDILUM HALTERES		123		87	21		42	500
	6/89	7 c	LIMNODRILUS HOFFMEISTERI		29	36	20	26	23	24	158
	6/89	7c	CRYPTOCHIRONOMUS FULVUS		14	10	12	23	19	12	90
	6/89	7c	PRISTINA SYNCLITES		18	1	- 1	8 15	9	2	39
	6/89	7c	CRICOTOPUS SP.		4	4 6	2 2	5	6		34
	6/89	7c	CRYPTOTENDIPES SP.		1	2	2	14	6 3	2 0	22
	6/89 6/89	7c	TANYTARSUS SP.		4	4					. 22
	6/89	7c 7c	PROCLADIUS NR. ADUMBRATUS HABER SPECIOSUS		2		1	6 2	4	0	19 9
	6/89	7c	STICTOCHIRONOMUS. SP.		1	2 0	Ó	3	2	1	7
	6/89		GAMMARUS PALUSTRIS		i		0	1		Ó	5
	6/89	7c	PSEUDOCHIRONOMUS SP.		Ö	3	0	Ó	1	Ö	4
	6/89	7c	STEMPELLINA SP.		Õ	0	0	1	1	2	4
	6/89	7c	HARNISCHIA SP.		Ö	Õ	1	Ö	2	Ō	3
	6/89	7 c	CLADOTANYTARSUS SP.		ō	ō	ò	1	ō	ĭ	2
	6/89	7c	PODOCOPA SP.		1	1	ō	Ó	Ō	Ó	2
	6/89	7c	CHIRONOMUS SP.		1	0	Ō	1	ō	. 0	2
	6/89	7c	PARALAUTERBORNIELLA NIGROHALTERALIS		0	1	1	0	0	0	2
4/	6/89	7с	PRISTINA AEQUISETA		1	0	0	0	0	0	1
4/	6/89	7c	CRYPTOCHIRONOMUS SP.		0	0	0	1	0	0	1
	6/89	7c	CRICOTOPUS SP.		0	0	0	0	1	0	1
	6/89	7 c	TAPHROMYSIS BOWMANI		1	0	0	0	0	0	1
4/	6/89	7c	LARSIA SP.		1	0	0	0	0	0	. 1
9/1	1/89	1a	IMM. TUBIFICIDAE SP. W/O		157	143	199	146	144	37	826
	1/89	1a	POLYPEDILUM HALTERES		11	2	9	4	1	0	27
	1/89	1a	PRISTINA SYNCLITES		4	1	2	7	0	2	16
	1/89	1a	CRYPTOCHIRONOMUS FULVUS		1	6	3	3	3	0	16

Table 1. Myakka River Benthos, April and September 1989.

Date	Statio	n Ta×a	1	2	3	4	5	6	Total
9/11/8	39 1a	TANYTARSUS SP.	3	2	1	. 6	1	0	13
9/11/8		LIMNODRILUS HOFFMEISTERI	1	- 2	2	1	1	0	7
9/11/8		EINFELDIA SP.	1	1	1	1	0	0	4
9/11/8	39 1a	CERATOPOGONIDAE SP.	1	1	0	0	0	0	2
9/11/8	39 1a	LAUTERBORNIELLA AGRAYLOIDES	0	2	0	_	0	0	2
9/11/8	39 1a	AULODRILUS PIGUETI	1	_	0	0	0	0	. 1
9/12/8	39 1a	PODOCOPA SP.	0	121	11	38	1	2	173
9/11/8	39 1b	IMM. TUBIFICIDAE SP. W/O	23	42	78	22	25	22	212
9/12/8		PODOCOPA SP.	.1	13	0	0	0	0	14
9/11/8	39 1c	IMM. TUBIFICIDAE SP. W/O	150	48	64	77	27	58	424
9/11/8	39 1c	CRYPTOCHIRONOMUS FULVUS	3	1	1	1	3	1	10
9/11/8	39 1c	LIMNODRILUS HOFFMEISTERI	1	0	0	0	0	0	· 1
9/11/8	9 1c	EINFELDIA SP.	0	0	1	0	0	0	1
9/11/8	39 1c	PSEUDOCHIRONOMUS SP.	0	٥	1	0	0	0	1
9/11/8	9 1c	PARALAUTERBORNIELLA NIGROHALTERALIS	0	0	0	0	1	0	1
9/11/8	19 1c	POLYPEDILUM HALTERES	. 0	0	0	0	0	1	1.
9/12/8	89 - 5a	IMM. TUBIFICIDAE SP. W/O	52	25	69	94	63	147	450
9/12/8	9 5a	HABER SPECIOSUS	0	0	1	1	0	3	5
9/12/8		POLYPEDILUM HALTERES	2	1.	0	0	0	1	4
9/12/8		LIMNODRILUS HOFFMEISTERI	0	0	0	2	0	1	3
9/12/8		STICTOCHIRONOMUS SP.	0	0	1	0	0	Ó	,1
9/12/8		PSEUDOCHIRONOMUS SP.	0	Ō	0	Ō	1	Ŏ	1
9/12/8		ABLABESMYIA PARAJUNTA	Ŏ	ō	Ö	Ö	Ö	1	1
9/12/8		HYALELLA AZTECA	Ō	Ō	1	Ō	Ō	. 0	1
9/12/8	19 5b	IMM. TUBIFICIDAE SP. W/O	8	9	10	8	18	21	74
9/12/8		HABER SPECIOSUS	0	1	0	0	0	0	1
9/12/8		LIMNODRILUS HOFFMEISTERI	0	0	0	0	0	1	1
9/12/8	19 5c	IMM. TUBIFICIDAE SP. W/O	11	40	8	47	52	29	187
9/12/8	9 5c	LIMNODRILUS HOFFMEISTERI	0	0	0	1	1	0	2
9/12/8	9 5c	HABER SPECIOSUS	0	0	0	0	0	1	1
9/12/8	9 5c	CRYPTOCHIRONOMUS FULVUS	0	0	0	1	0	0	1
9/12/8	19 5c	STICTOCHIRONOMUS SP.	0	0	. 0	0	1	0	1
9/12/8	9 7a	IMM. TUBIFICIDAE SP. W/O	26	24	23	107	15	17	212
9/12/8	19 7a	CERATOPOGONIDAE SP.	0	0	0	1	0	2	3
9/12/8	9 7a	LIMNODRILUS HOFFMEISTERI	1	0	0	0	0	1	2
9/12/8	9 7a	AULODRILUS PIGUETI	0	0	0	1	1	0	2
9/12/8	9 7a	COELOTANYPUS SP.	0	1	1	0	0	0	2
9/12/8		HABER SPECIOSUS	0	0	0	0	1.	0	1
9/12/8		ABLABESMYIA PARAJUNTA	1	0	0	0	0	0	1
9/12/8	9 7a	OECETIS SP.	0	0	0	1	0	0	1
9/12/8		CHIRONOMIDAE SP.	0	. 0	0	1	0	0	1.
9/12/8		DICROTENDIPES NEOMODUSTUS	0	0	0	1	0	0	1.
9/12/8		RITHROPANOPEUS HARRISII	0	0	0	0	0	0	0
9/12/8	9 7a	SPHAEROMA TEREBRANS	0	0	0	0	. 0	0	. 0
9/12/8		IMM. TUBIFICIDAE SP. W/O	18	15	14	26	15	37	122
9/12/8		LAEONEREIS CULVERI	1	1	3	. 0	1	2	8
9/12/8		LIMNODRILUS HOFFMEISTERI	3	0	1	0	0	1	5
9/12/8		HABER SPECIOSUS	1	0	0	0	0	4	5
9/12/8	9 7b	STICTOCHIRONOMUS SP.	0	0	Ō	0	. 1	1	2

Table 1. Myakka River Benthos, April and September 1989.

Date	Station	n Taxa	1	2	3	4	5	6	Total.
9/12/	89 7b	GAMMARUS PALUSTRIS	0	0	2	0	0	0	2
9/12/	89 7b	BRATISLAVIA UNIDENTATA	1	0	0	0	0	0	1
9/12/	89 7b	RITHROPANOPEUS HARRISII	1	0	0	0	0	0	1
9/12/	89 7c	POLYPEDILUM HALTERES	14	6	22	3	14	8	67
9/12/	89 7c	LAEONEREIS CULVERI	11	9	0	3	4	7	34
9/12/	89 7c	CERATOPOGONIDAE SP.	1	0	2	5	2	0	10
9/12/	89 7c	PROCLADIUS NR. ADUMBRATUS	0	0	2.	1	0	1	. 4
9/12/	89 7c	CRYPTOTENDIPES SP.	0	2	1	0	0	0	3.
9/12/	89 7c	TANYTARSUS SP.	0	1	0	0	2	0	3
9/12/	89 7c	CRICOTOPUS SP.	0	0	2	0	1	0	3
9/12/	89 7c	HARNISCHIA SP.	0	0	1	1	0	0	2
9/12/	89 7c	CRYPTOCHIRONOMUS FULVUS	0	0	1	0	0	0	1
9/12/	89 7c	TAPHROMYSIS ROWMANI	n	Ο	n	0	1	n	1

Table 2. Phylogenetic list of Myakka River Benthos, April and September 1989.

PHYLUM NEMERTEA PROSTOMA RUBRUM PHYLUM ANNELIDA ORDER PHYLLODOCIDA FAMILY NEREIDAE LAEONEREIS CULVERI FAMILY GONIADIDAE GLYCINDE SOLITARIA CLASS ARCHIANNELIDA FAMILY POLYGORDIIDAE LUMBRICULUS VARIEGATUS **ECLIPIDRILUS PALUSTRIS** CLASS OLIGOCHAETA ORDER TUBIFICIDA FAMILY ENCHYTRAEIDAE ENCHYTRAEIDAE SPP FAMILY TUBIFICIDAE IMM. TUBIFICIDAE SP. W IMM. TUBIFICIDAE SP. W/O LIMNODRILUS HOFFMEISTERI AULODRILUS PIGUETI HABER SPECIOSUS FAMILY NAIDIDAE NAIDIDAE SP. SLAVINA APPENDICULATA PRISTINA SYNCLITES PRISTINA AEQUISETA PRISTINA LEIDYI DERO FLABELLIGER DERO TRIFIDA DERO DIGITATA DERO VAGA NAIS COMMUNIS NAIS ELINGUIS NAIS PARDALIS NAIS AEQUISETA BRATISLAVIA UNIDENTATA FAMILY OPISTOCYSTIDAE CRUSTIPELLIS TRIBRINCHIATUS CLASS HIRUDINOIDEA HELOBDELLA TRISERIALIS PHYLUM MOLLUSCA CLASS GASTROPODA ORDER BASOMMATOPHORA FAMILY ANCYLLIDAE ANCYLIDAE SP. LAEVAPEX FUSCUS HEBETANCYLUS EXENTRICUS FAMILY PLANORBIDAE PLANORBIDAE SP.

FAMILY PLANORBIDAE
PLANORBIDAE SP.
GYRAULUS PARVUS
PROMENETUS EXACUOUS
MENETUS SAMPSONI
BIOMPHALARIA GLABRATA
FAMILY PHYSIDAE

FAMILY PHYSIDAE
PHYSELLA SP.
CLASS BIVALVIA

Table 2.
Phylogenetic list of Myakka River Benthos, April and September 1989.

ORDER UNIONIDA FAMILY UNIONIDAE ELLIPTIO BUCKLEYI ORDER VENEROIDA FAMILY CORBICULIDAE CORBICULA MANILIENSIS FAMILY PISIDIIDAE SPHAERIUM PARTUMEIUM PHYLUM ARTHROPODA SUBPHYLUM CRUSTACEA CLASS OSTRACODA SUBCLASS PODOCOPA PODOCOPA SP. SUBCLASS MALACOSTRACA ORDER MYSIDACEA FAMILY MYSIDAE MYSIDOPSIS FURCA TAPHROMYSIS BOWMANI ORDER ISOPODA FAMILY SPHAEROMATIDAE SPHAEROMA SP. SPHAEROMA TEREBRANS ORDER AMPHIPODA FAMILY AORIDAE GRANDIDIERELLA BONNIEROIDES FAMILY GAMMARIDAE GAMMARUS PALUSTRIS FAMILY HYALELLIDAE **HYALELLA AZTECA** FAMILY TALITRIDAE TALTRIDAE SP. ORDER DECAPODA FAMILY ASTACIDAE ASTACIDAE SP. FAMILY XANTHIDAE RITHROPANOPEUS HARRISII CLASS INSECTA ORDER COLLEMBOLA FAMILY HEPTAGENIIDAE STENONEMA SP. (DAM) ORDER COLEOPTERA FAMILY HALIPLIDAE BRYCHIUS SP. FAMILY GYRINIDAE DINEUTIS SP. FAMILY ELMIDAE STENELMIS SP. DUBIRAPHIA SP. ORDER TRICHOPTERA FAMILY HYDROPSYCHIDAE CHEUMATOPSYCHE SP. FAMILY HYDROPTILIDAE HYDROPTILA SP. ORTHOTRICHIA SP.

FAMILY LEPTOCERIDAE

LEPTOCERIDAE SP. OECETIS SP.

Table 2.
Phylogenetic list of Myakka River Benthos, April and September 1989.

ORDER DIPTERA FAMILY CERATOPOGONIDAE CERATOPOGONIDAE SP. FAMILY CHIRONOMIDAE CHIRONOMIDAE SP. COELOTANYPUS SP. PROCLADIUS NR. ADUMBRATUS CORYNONEURA TARIS CRICOTOPUS SP. MICROTENDIPES PEDELLUS GP. STENOCHIRONOMUS SP. TANYTARSUS SP. LAUTERBORNIELLA AGRAYLOIDES HARNISCHIA SP. TANYPUS SP. TANYPODINAE SP. (DAM) CRYPTOCHIRONOMUS SP. CRYPTOCHIRONOMUS FULVUS POLYPEDILUM SP. POLYPEDILUM CONVICTUM POLYPEDILUM HALTERES PSEUDOCHIRONOMUS SP. PSEUDOCHIRONOMUS SP. A STICTOCHIRONOMUS SP. CLADOTANYTARSUS SP. CLADOTANYTARSUS VANDERWULPI GP. ABLABESMYIA MALLOCHI ABLABESMYIA PARAJUNTA DICROTENDIPES NEOMODUSTUS NANNOCLADIUS MINIMUS PARALAUTERBORNIELLA NIGROHALTERALIS RHEOTANYTARSUS SP. ORTHOCLADIINAE SP. (DAM) PARACHIRONOMUS SP. PARACHIRONOMUS ARCUATUS GP. PARACHIRONOMUS ABORTIUS/HIRTALATU PENTANEURA SP. THIENEMANNIELLA SP. (DAM) TANYTARSINI SP. CHIRONOMINI SP. (DAM) EINFELDIA SP. CRYPTOTENDIPES SP. LABRUNDINIA NEOPILOSELLA LABRUNDINIA JOHANNSENI LABRUNDINIA PILOSELLA CLADOPELMA SP. DEMICRYTOCHIRONOMUS SP. LARSIA SP. MICROPSECTRA SP. NILOTHAUMA SP. NOTOPHILINAE SP. PARAKIEFFERIELLA SP. PARATANYTARSUS SP. PEDIONOMUS BECKAE PHAENOPSECTRA FLAVIPES STEMPELLINA SP.

ZAVRELIMYIA SP.

Table 3. Myakka River Benthos: Number of taxa and individuals by major groups.

Sampli	ng .	To	tal	Oligoc	haeta	Chiron	omidae
Month	Station	Taxa	Inds.	Taxa	Inds.	Taxa	Inds.
Apr	1a	45	1376	12	611	25	629
Apr	1b	32	1386	6	330	18	902
Apr	1c	49	1336	11	322	22	703
Арг	2a	54	3657	13	841	23	1875
Apr	2 b	33	947	4	205	11	157
Apr	2c	43	2465	10	661	16	301
Apr	3a	31	942	14	466	13	174
Apr	3b	21	746	8	405	10	328
Apr	3c	31	2974	13	1136	16	504
Apr	4a	19	763	7	294	. 9	461
Apr	4b	12	397	5	180	6	203
Apr	4c	13	602	7	313	5	285
Apr	5a	20	620	6	317	10	150
Apr	5 b	19	339	7	159	9	142
Apr	5c	16	55 0	8	509	6	38
Apr	6a	29	1954	14	1464	12	324
Apr	6b	32	2752	12	629	16	2054
Apr	6c	27	1334	11	944	12	361
Apr	7a	23	929	7	456	9	349
Apr	7 b	16	124	5	51	8	52
Apr	7c	26	3477	6	2187	17	1282
Sep	1a	10	914	4	850	5	62
Sep	1b	3	399	1	212	0	0
Sep	1c .	7	439	2	425	5	14
Sep	5a	8	466	3	458	4	7
Sep	5b	3	76	3	76	0	0
Sep	5c	5	192	3	190	2	2 5
Sep	7a	10	226	4	217	4	5
Sep	7b	8	146	5	141	1	2
Sep	7c	. 10	128	1	34	7	83

APPENDIX 3

Data Tables Task 4 and Task 6

Station	Date	Start Time		рН Std.		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	V į	nd	
					(ft.)					conditions	Ç	Speed (mph)	Direction	
B110	01/18/89	1055	1112	7.49	6.75	0.40			89-0062	FOGGY	19.0	CALM		
B110	01/18/89		1112	7.49					89-0063	FOGGY	19.0	CALM		
B110	02/06/89		1035	6.67		0.50			89-0078	CL	28.0	10	E	
8110	02/06/89	1020	1035	6.70	6.70	0.50			89-0079	CL	28.0	10	E	
B110	02/27/89	1029	1051						89-0114	PC 35%	24.0	0-5	220	
B110	02/27/89		1051						89-0115	PC 35%	24.0	0-5	220	
B110	03/02/89		1054						89-0245	OC	24.0	7	120	
B110	03/02/89		1054							0C	24.0	7	120	
B110	03/03/89		1031						89-0261		22.0	6-10	100	
B110	03/03/89		1031						89-0262	PC 10%	22.0	6-10	100	
B110	03/13/89		1019							PC 50%		0-3	320	
B110	03/13/89		1019							PC 50%		0-3	320	
B110	04/10/89		1059						89-0313		32.0	3-5	220	
B110	04/10/89		1059						89-0314		32.0	3-5	220	
B110	05/01/89		1046						89-0349		28.0	7-9	170	
B110	05/01/89 05/30/89		1046 0949						89-0350 89-0474	PC 75% PC 60%	28.0 21.0	7-9 4-7	170 140	
B110 B110	05/30/89		0949						89-0475	PC 60%	21.0	4-7	140	
B110	06/06/89		1724						89-0508	OC 00%	27.0	CALM	140	
B110	06/05/89		1724						89-0509		27.0	CALM		
B110	06/07/89		1707						89-0534		32.0	2-6	210	
	06/07/89								89-0535		32.0	2-6	210	
	06/07/89		0527						89-0524		24.0	CALM		
	06/07/89		0527						89-0525	FOGGY	24.0	CALM		
B110	06/25/89		1035		7,11				89-0550	CL	28.0	3	180	
B110	06/25/89		1035		7.11				89-0551		28.0	3	180	
B110	07/10/89	1041	1057	6.44		2.25			89-0586	PC 50%		3-4	100	
B110	07/10/89	1041	1057							PC 50%		3-5	100	
	07/24/89		1145	6.49						PC 80%	31.0	4-5	60	
	07/24/89		1145	6.46	9.02				89-0626		31.0	4-5	50	
	07/25/89		1047	6.05	9.73					PC 60%	29.5	7	80	
	07/25/89		1047	6.00	9.73				89-0639		29.5	7	80	
	07/25/89				9.91					PC THUNDER	32.0	4-7	60	
	07/25/89				9.91					PC THUNDER		4-7	60	
	07/26/89					2.45			89-0654		28.0			
	07/26/89				10.00				89-0655		28.0		100	
	07/27/89				9.61 9.61				89-0668 89-0669		29.0	2-5 2-5	120 120	
	07/28/89				9.01				89-1658		29.0 31.0	2-3 2-4	220	
	07/28/89		1116		9.02				89-1659		31.0	2-4	220	
	07/29/89				8.53				89-1670		27.0	2-4 CALM		
	07/29/89		0909			2.10			89-1671		27.0	CALM		
	03/07/89					1.65			89-1694		28.0	CALM		
	08/07/89				7.52				89-1695		28.0	CALM		
	08/21/89				7.80				89-1734	PC 75%	29.0	4-6	160	
	08/21/89			7.13	7.80	1.80			89-1735	PC 75%	29.0	4-6	160	
	09/11/89			6.50	8.55	2.00			89-1870	PC 15%	30.0	5	SE	

	Station	Date	Start Time			Gage	Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Vi	nd
					units	(ft.)	(m)				conditions	0	Speed (mph)	Direction
	•				٠.								, mp	
	B110	09/11/89	1052	1100	6.49	8.55	2.00			89-1871	PC 15%	30.0	5	SE
	B110	09/25/89		1102	6.78		1.25			89-1866	00	26.0	5-7	
	B110	09/25/89		1102	6.74	5.87				89-1867	30	26.0	5-7	80
	B110	09/26/89		1104	6.58	8.94				89-1912	PC 90%	29.0	3-7	160
	B110	09/26/89		1104	6.51	8.94				89-1913	PC 90%	29.0	3-7	160
	B110	09/27/89		1033		10.17				89-1990	PC 20%	27.0	2-3	140
	B110	09/27/89		1033		10.17				89-1991	PC 20%	27.0	2-3	140
	B110	09/28/89				10.71				89-2006	PC 15%	28.0	5-7	100
	B110	09/28/89		1017		10.71				89-2007	PC 15%	28.0	5-7	100
	B110	09/29/89		1107		10.54				89-2020	PC 60%	28.0	3-7 9	
	B110	09/29/89		1107		10.54				89-2021	PC 60%	28.0	. 9	100
		10/30/89		1024	6.87		0.60			89-2036			•	100
	B110	10/30/89		1024	6.78	4.25				89-2037	00 00	23.5 23.5	4	320
	B110	11/13/89		1031	7.05					89-2072	PC 80%		· 4	320
	B110	11/13/89		1031	7.07	3.84				89-2073	PC 80%	26.0	5-7	110
	B110	12/04/89		1130		3.86				89-2378		26.0	5-7	110
	B110	12/04/89		1130	7.15	3.86				39-2379	CL	17.0	CALM	
	B120	01/18/89		1010		10.54			~~~	89-0060	CL	17.0	CALM	177
	B120	01/18/89		1010		10.54					FOGGY	20.0	2-3	W
	B120	02/06/89		0933		10.69					FOGGY	20.0	2-3	NW
	B120	02/06/89		0933		10.69				89-0075	CL	22.0	5-7	T.
	B120	02/00/89		0950		10.53				89-0077	CL	22.0	5-7	V
	B120	02/27/89		0950		10.53				89-0112 89-0113	CL.	23.0	3-4	120
	B120	03/02/89		1000		10.60					CL	23.0	3-4	120
	B120	03/02/89			-8.08					89-0243 89-0244	00	24.5	0-2	60
		03/02/09		0932		10.68				89-0259	OC 0*	24.5	0-2	60
•	B120	03/03/89		0932		10.68				89-0260	PC 2%	23.5	2-5	120
		03/03/89		0932		10.66				89-0275	PC 2%	23.5	2-5	120
	B120	03/13/89									PC 60%	23.0	3-5	300
		03/13/09		0927		10.66				89-0276	PC 60%	23.0	3-5	300
				1016						89-0311	PC 35%	29.0	7-10	220
	B120	04/10/89		1016						89-0312	PC 35%	29.0	7-10	220
	B120 B120	05/01/89		0958 :						89-0347	PC 80%	27.0	8-9	180
		05/01/89		0958		10.00			7	89-0348	PC 80%	27.0	8-9	180
		05/30/89		1736		10.20				89-0383	RAIN	21.0	CALM	
				1736		10.20				89-0384	RAIN	21.0	CALM	
		06/06/89		2313		10.20					PC	22.0	CALM	·
		06/06/89		2313		10.20				89-0523	PC	22.0	CALM	
		06/06/89		1631		10.44				89-0506	RAIN	24.0	CALM	
		06/06/89		1631		10.44				89-0507	RAIN	24.0	CALM	
		07/10/89		1002		10.34				89-0584	PC 30%	30.0	0-2	120
		07/10/89		1022		10.34				89-0585	PC 30%	30.0	0-2	120
		07/24/89		1048		10.54				89-0623	PC 80%	29.0	. 3-5	60
		07/24/89		1048		10.54				89-0624	PC 80%	29.0	3-5	-60
		07/25/89		0947		10.54				89-0620	PC 50%	28.0	4-5	80
		07/25/89 08/07/89		0947		10.54				89-0621	PC 50%	28.0	4-5	80
		08/07/89			6.33						PC 10%	28.0	CALM	
	DIEA .	60110100	0.200	1009	0.32	11.19	0.00			89-1693	ru 10%	. 28.0	CALM	

Station	Date	Start Time	End Time	pH Stđ.		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Vi	nđ
				units	(ft.)	(m)				conditions	С	Speed (mph)	Direction
D 1 0 0	00 (01 (00	0047	0057	c 71	11 10	0 50			89-1732		26.0	CALM	
B120 B120	08/21/89 08/21/89		0957 0957		11.18				89-1733			CALM	
B120	09/11/89		1013		13.56				89-1868	CL	28.0	0-5	SE
B120	09/11/89		1013		13.56				89-1869	CL	28.0	^ 0-5	SE
B120	09/25/89		1002		11.89				89-1856	RAIN	23.2	CALM	J.
B120	09/25/89		1002		11.89				89-1857	RAIN	23.2	CALM	
B120	09/26/89		1005		13.54				89-1910	00	26.0	<2	260
8120	09/26/89		1005		13.54				89-1911	0C	26.0	<2	260
B120	09/27/89		0935			1,10			89-1988	PC 15%	25.0	CALM	
B120	09/27/89		0935		13.80				89-1989	PC 15%	25.0	CALM	
B120	09/28/89		0913		13.48				89-2004	CL .	26.0	CALM	
B120	09/28/89		0913		13.48				89-2005	CL	26.0	CALM	
B120	09/29/89		1010		13.12				89-2018	PC 75%	26.0	4-6	120
B120	09/29/89		1010		13.12				89-2019	PC 75%	26.0	4-6	120
B120	10/30/89		0925		10.61				89-2034	00	23.0	2	320
8120	10/30/89	0910	0925		10.61				89-2035	00	23.0	2	320
B120	11/13/89	0923	0935	7.39	10.53	0.20			89-2070	PC 70%	26.0	2-4	30
B120	11/13/89	0923	0935	7.41	10.53	0.20			89-2071	PC 70%	26.0	2-4	30
B120	12/04/89	1024	1037	7.62	10.48	0.20			89-2376	CL	20.0	CALM	
B120	12/04/89	1024	1037	7.60	10.48	0.20			89-2377	CL	20.0	CALM	
B130	01/18/89	1142	1205	7.10	15.26	1.70			89-0064	FOGGY	17.5		
B130	01/18/89	1142	1205	7.10	15.25	1.70			89-0065	FOGGY	17.5		
B130	02/06/89	1058	1123	6.43	15.56	1.70			89-0080	PC 70%	28.0	10	E
B130	02/06/89	1058	1123		15.56				89-0081	PC 70%	28.0	10	Ξ
B130	02/27/89		1144		15.22				89-0116	PC 30%	23.5	7	200
B130	02/27/89		1144		15.22				89-0117	PC 30%	23.5	7	200
B130	03/02/89		1134		15.30				89-0247	00	28.0	3-5	100
B130	03/02/89		1134		15.30				89-0248	0C	28.0	3-5	100
B130	03/03/89		1116		15.60				89-0263	PC 50%	23.0	0-7	100
B130	03/03/89		1115		15.60				89-0264	PC 50%	23.0	0-7	100
B130	03/13/89		1101		15.96				89-0279	PC 20%	27.0	CALM	
B130	03/13/89		1101		15.96			-+-	39-0280	PC 20%	27.0	CALM	^~~
B130	04/10/89					1.60			89-0315		29.5		200
B130	04/10/89		1142		15.42				89-0316		29.5	5-8	200
B130	05/01/89		1124		15.45					PC 65%	29.0	8-10	160
B130	05/01/89		1124		15.45				89-0352	PC 65%	29.0	8-10	160
B130	05/30/89		1037		14.62			•	89-0476	PC 80%	30.0	4-6	120
B130	05/30/89		1037		14.62				89-0477 89-0510	PC 80%	30.0	4-6	120
B130 B130	06/06/89 06/06/89		1758 1758		14.54				89-0511	0C 0C		CALM	
B130	06/07/89		1814		14.54					PC 70%	34.0	CALM 4-9	210
B130	06/07/89		1814		14.61				89-0537		34.0	4-9	210
B130	06/07/89		0940		14.50				89-0532			CALM	
B130	06/07/89		0940		14.60				89-0533			CALM	
B130	06/09/89		0946		14.58				89-0544		32.0	CALM	
B130 -	06/09/89		0946		14.58				89-0545	PC 40%	32.0	CALM	
B130	06/26/89		1120		16.02				89-0552		30.0	3-4	100

Station	Date	Start Time	End Time	pH Std.		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	. Wi	nd
					(ft.)					conditions	C	Speed (mph)	Direction
D+00	00 100 100	1101	1100	c 11	16 00	1 00			89-0553	PC 10%	30.0	3-4	100
	06/26/89 07/10/89		1120 1141		16.02 17.94				89-0588	PC 30%	32.0	2-3	120
	07/10/89		1141		17.94				89-0589	PC 30%	32.0	2-3	120
	07/24/89		1216		17.36				89-0627	PC 80%	30.0	11	50
	07/24/89		1216		17.36				89-0628	PC 80%	30.0	11	60
	07/25/89	1104	1119		17.53		÷		89-0640	PC 50%	29.5	14	80
B130	07/25/89	1104	1119	6.16	17.53	2.60			89-0641	PC 50%	29.5	14	80
B130	07/26/89	1114	1127	6.08	17.50	2.40			89-0656	HZ 80%	30.0	5	80
	07/26/89		1127		17.60				89-0657	HZ 80%	30.0	5	80
	07/28/89		1157		17.60				89-1660	PC 30%	34.0	2-6	180
	07/28/89		1157		17.60				89-1661	PC 30%	34.0	2-6.	
	07/29/89		0942		17.46				89-1672	PC 15%	27.0	2-4	120
	07/29/89		0942		17.46				89-1673	PC 15%	27.0	2-4	120
	07/30/89				17.31				89-1682	PC 50%	29.0	CALM	***
	07/30/89		1105		17.31				89-1683	PC 50%	29.0	CALM	. 100
	08/07/89		1135		16.99 16.99				89-1696 89-1697	PC 40%	31.0	2-7	180
	08/07/89 08/21/89		1135 1121		16.96				89-1736	PC 40% PC 70%	31.0	2-7 4-6	180 160
	08/21/89		1121		16.96				89-1737	PC 70% -	32.0	4-6	160
	09/11/89		1140		17:40				89-1872	PC 20%	30.0	7-8	E
	09/11/89		1140		17.40				89-1873	PC 20%	30.0	7-8	Ē
	09/25/89		1142		16.52				89-1864	00	27.0	2-4	-80
·B130	09/25/89	1129	1142	6.29	16.52	1.60			89-1865	00	27.0	2-4	80
B130	09/26/89	1126	1135	6.31	17.34	2.40			89-1914	PC 75%	28.0	6	200
	09/26/89		1135		17.34				89-1915	PC 75%	28.0	6	200
	09/27/89		1100		17.73				89-1992		29.0	2-4	100
	09/27/89		1100		17.73				89-1993		29.0	2-4	100
	09/28/89		1103		17.87				89-2008	PC 40%	29.9	6-8	- 100
	09/28/89		1103		17.87				89-2009	PC 40%	29.9	6-8	100
B130	09/29/89		1135		18.03				89-2022	PC 75%	29.0	7	100
	09/29/89 10/03/89		1135		18.03 17.57				89-2023 89-2030	-PC 75% CL	29.0	7 6-7	100 20
B130 B130	10/03/89		1012		17.57				89-2031		28.0 28.0	6-7	20
	10/33/89		1100		16.03				89-2038	· 06		CALM	
B130	10/30/89		1100		15.03				89-2039			CALM	
	11/13/89		1102		15.74				89-2074		25.5	10	100
B130	11/13/89		1102		15.74				89-2075	PC 80%	25.5	10	100
B130	12/04/89		1202		15.76				89-2380	CL	13.0	CALM	
B130	12/04/89	1149	1202		15.76				89-2381	CL	13.0	CALM	
B140	01/18/89	1229	1251	6.77	33.94	1.70			89-0066	FOGGY	19.0	5-8	NO
B140	01/18/89		1251		33.94				89-0067	FOGGY	19.0	5-8	W
B140	02/06/89						,		89-0082	PC	28.0	-15	
	02/06/89		1212					·	89-0083		. 28.0	15	SE
	02/27/89		1256		33.82				89-0118	PC 20%	23.0	4-6	200
	02/27/89		1256		33.32				89-0119	PC 20%	23.0	4-6	200
	03/02/89		1217		33.80				89-0249	0C	24.0	2-3	140 140
B140	03/02/89	113/	1217	1.04	33.30	T. 20			89-0250	OC	24.0	2-3	140

Station	Date	Start Time	End Time	pH Std.		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Vi	nd
					(ft.)					conditions	C	Speed (mph)	Direction
B140	03/03/89		1214		34.20				89-0265	00	27.0	2-5	140
8140	03/03/89		1214		34.20				89-0266	00	27.0	2-5	140
B140	03/13/89		1142		35.23				89-0281	PC 20%	27.0	2-4	280
B140	03/13/89		1142		35.23				89-0282	PC 20%	27.0	2-4	280
B140	04/10/89		1224		34.38				89-0317	PC 10%		2-5	180
B140	04/10/89		1224		34.38				89-0318	PC 10%	00.0	2-5	180
B140	05/01/89		1202		34.09				89-0353	PC 60%	30.0	8-12	180
B140	05/01/89		1202		34.09				89-0354	PC 60%	30.0	8-12	190
B140	05/30/89		1113		33.60				89-0478	PC 80%	33.0	5-7	20
B140	05/30/89		1113		33.60				89-0479	PC 80%	33.0	5-7	20
B140	06/06/89		1829	7.16	5,36				89-0512	RAIN		CALM	
B140	06/06/89		1829	7.16	5.36				89-0513	RAIN	00.0	CALM	010
B140	06/07/89		1902	6.93	5.35				89-0538	PC 60%	30.0	2-5	210
B140	06/07/89		1902	6.92	5.35				89-0539	PC 60%	30.0	2-5	210
B140	06/09/89		1041	6.88	5.29				89-0546	PC 50%	32.0	3-5	160
B140	06/09/89		1041	6.90		1.35			89-0547	PC 50%	32.0	3-5	160
B140	06/26/89		1149	6.72	5.29				89-0554	PC 30%	30.0	CALM	
B140	06/26/89		1149	6.68	5.29				89-0555	PC 30%	30.0	CALM	
B140	07/10/89		1218		36.94				89-0590	PC 40%	32.0	3-4	60
B140	07/10/89		1218		36.94				89-0591	PC 40%	32.0	3-4	60
B140	07/24/89		1251		36.10				89-0629	PC 80%	28.0	7	60
8140 8140	07/24/89		1251		36.10				89-0630 89-0642	PC 80% PC 50%	28.0 29.5	7 8-10	60 - 80
B140 B140	07/25/89 07/25/89		1158 1158	5.16 5.12	6.20 6.20				89-0643	PC 50%	29.5	8-10	80 80
B140	07/26/89		1201		36.28				89-0658	HZ 70%	29.0	3-10	60
B140	07/26/89		1201		36.28				89-0659	HZ 70%	29.0	3-5	60
B140	07/28/89		1245	6.33	6.47				89-1662	PC 30%	34.0	CALM	
B140	07/28/89		1245	6.35	6.47				89-1663	PC 30%	34.0	CALM	
B140	07/29/89		1021	6.54		2.40			89-1674	PC 25%	28.0	2-4	120
B140	07/29/89		1021	6.62	6.48				89-1675	PC 25%	28.0	2-4	120
B140	07/30/89		1143	6.19	6.43				89-1684	PC 80%	31.0	CALM	120
B140	07/30/89		1143	6.21	6.43				89-1685	PC 80%	31.0	CALM	
B140	07/31/89		1042	6.07	6.47				89-1688	PC 50%	30.0	CALM	
8140	07/31/89				6.47					PC 50%	30.0	CALM	
B140	08/07/89		1206	5.69		2.10		•••	89-1698		32.0	2-4	160
B140	08/07/89		1206	5.69					89-1699		32.0	2-4	160
B140	08/21/89		1156	6.39		3.05			89-1738		30.1	4-6	160
B140	08/21/89		1156	6.38		3.05			89-1739		30.1	4-6	160
B140	09/11/89		1348	6.45		3.50				PC 40%	33.0	8-10	Ņ
B140	09/11/89		1348	6.43		3.50			89-1875	PC 40%	33.0	8-10	N
B140	09/25/89		1222	6.43	5.69					PC 90%	28.0	7	180
B140	09/25/89		1222	5.39					89-1859		28.0	ż	180
B140	09/27/89		1136	6.77		3.40			89-1994		30.0	5-8	100
B140	09/27/89		1136	6.75		3.40			89-1995		30.0	5-8	100
B140	10/03/89			6.34					89-2032	CL	26.0	5-9	360
8140	10/03/89			6.30					89-2033	CL	26.0	5-9	360
B140	10/30/89		1140	6.90					89-2-4-	00	23.5	CALM	

	Station	Date	Start Time				Depth, Total	Tide	Stratified	Cont. Number	Weather general conditions	Air Temp C		nd
					diites	116.1	(111)				Conditions		(mph)	Direction
			-		*					•	•			
	B140	10/30/89	1105	1140	6.86	4 56	2.90			89-2041	00	23.5	CALM	
	B140	11/13/89		1141	7.19		2.30			89-2076	PC 90%	26.5	4-6	
	B140	11/13/89.		1141	7.13		2.80			89-2077	PC 90%	26.5	4-0 4-6	110
	B140	12/04/89		1245	7.84		2.60	`		39-2382	CL TO TO A	15.0		110
	B140	12/04/89		1245	7.77		2.60			89-2383	CL	15.0	2-4 2-4	20
	B140	01/18/89		1321		25.24				89-0069	CL	19.5	5-7	20
	B150	01/18/89		1321		25.24				89-0068	CF	19.5	5-7	NU
	B150	02/06/89		1341		25.18				89-0084	PC	32.0	7-10	NW Se
	B150	02/06/89				25.18		,		89-0085	PC	32.0	7-10	SE SE
	B150	02/07/89		1346		25.33				89-0120	PC 10%	26.0	5-7	
	B150	02/27/89		1346		25.33				89-0121	PC 10%	26.0	5-7 5-7	210 210
	B150	03/02/89		1328		25.32				89-0251	00	29.0	0-5	
		03/02/89		1328		25.32				89-0252	00	29.0	0-5	140 140
	B150	03/03/89		1335		26.27				39-0257	PC 95%	31.0	5-10	
	B150	03/03/89		1335		26.27				89-0268	PC 95%	31.0	5-10	205 205
	B150	03/03/03		1220		25.29				89-0283	PC 10%	28.0	3-10 4-7	280
	B150	03/13/89		1220		25.29				89-0284	PC 10%	28.0	4-7	280
	B150	04/10/89		1322		25.07				89-0319	PC 35%	31.0	2-4	
	B150	04/10/89		1322		25.07				89-0319	PC 35%	31.0		200
	8150	05/01/89		1233		25.46				89-0355	PC 60%	30.0	7-9	180
	B150	05/01/89		1233		25.46				89-0356	PC 60%	30.0	7-9	180
	B150	05/30/89		1148		24.97				39-0480	PC 80%	32.0	7-9	40
	B150	05/30/89		1148		24.97				89-0481	PC 80%	32.0	7-9	40
		06/06/89		1908		25.10				89-0514	RAIN	23.0	CALM	
		06/06/89	•	1908		25.10				89-0515	RAIN	23.0	CALM	
	B150	06/07/89	0621	0635	. 7.13					89-0526	PC 25%	23.5	CALM	
	B150	06/07/89	0621	0635	7.07	25.08	.0.30			89-0527	PC 25%	23.5	CALM	
		06/08/89	0919	0953	7.16	25.00	0.35			39-0540	PC 40%	28.0	6-8	120
		06/08/89		0953		25.00				89-0541	PC 40%	28.0	5-8	120
		06/26/89		1222	7.02	25.22	0.70			89-0555	PC 25% ·	31.0	CALM	
		06/26/89		1222		25.22				89-0556	PC 25%	31.0	CALM	
		07/10/89		1247	6.97	25.42	0.70			89-0592	PC 60%	33.0	3-4	100
		07/10/89				25.42				89-0593		33.0	3-4	100
		07/24/89				26.55					PC 90% TS NEAR		6-10	60
		07/24/89		1317		26.55					PC 90% TS NEAR	30.0	5-10	60
		07/25/89		1227		26.53				89-0644		31.0	7-9	120
		07/25/89				26.63				89-0645		31.0	7-9	120
•		07/26/89		1356		26.67					HZ 80%	33.0	2-3	100
		07/26/89		1356		25.67				89-0663		33.0	2-3	100
		07/28/89		1326		26.41				89-1664		35.0	CALM	
		07/28/89		1326		25.41				89-1665		35.0	CALM	
		07/29/89		1052		26.50				39-1676		29.0	CALM	120
		07/29/89		1052		26,50				89-1677		29.0	CALM	120
		08/07/89		1231		26.05				89-1700		31.0	5	300
		08/07/89		1231		25.05					PC 60%	31.0	5	300
		08/21/89		1223		25.91				89-1740	***********		2-5	160
	p130.	08/21/89	1409	1223	טע. ס	25,91	V.13			09-1/41		- 33.0	2-5	160

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Station	Date	Start Time		рН Std.		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Vį.	nd
					(ft.)					conditions	Ċ	Speed (mph)	Direction
B150	09/11/89	1400	1412	6.77	25.69	0.60			89-1876	PC 50%	30.0	7-8	NE
B150	09/11/89	1400	1412	5.76	25.69	0.60			89-1877	PC 50%	30.0	7-8	NЕ
B150	09/25/89	1241	1253	6.76	25.84	0.70			89-1908	PC 90%	29.0	5-7	160
B150	09/25/89	1241	1253	5.76	25.84	0.70			89-1909	PC 90%	29.0	5-7	160
B150	09/26/89		1223	7.11	26.26	0.75			39-1916	00	28.0		
B150	09/26/89		1230		26.26				89-1917	OC	28.0		
B150	09/27/89		1201		26.64				89-1996	PC 50%	32.0	4-6	100
B150	09/27/89		1201		26.64				89-1997	PC 50%	32.0	4-6	100
B150	09/28/89		1207		26.94				89-2010	PC 40%	30.2	5-9	100
B150	09/28/89		1207		26.94			,	89-2011	PC 40%	30.2	5-9	100
B150	09/29/89		1219		26.99				89-2024	PC 50%	31.5	7	100
B150	09/29/89		1219		26.99				89-2025	PC 50%	31.5	7	100
B150	10/30/89		1204		25.02				89-2042	00	24.0	2-3	340
B150	10/30/89		1204		25.02				89-2043	00	24.0	2-3	340
B150	11/13/89		1205		25.19				89-2078	PC 90%	27.5	6-8	100
B150	11/13/89				25.19				89-2079	PC 90%	27.5	6-8	100
B150	12/04/89		1315		25,07				89-2384	PC 10%	17.0	CALM	
8150 B160	12/04/89 01/18/89		1315 1532		25.07				89-2385 89-0070	PC 10% CL	17.0 22.0	CALM	
B160	01/18/89		1532	7.26	0.82				89-0070	CL	22.0	CALM Calm	
B160	02/06/39		1408	7.27	1.33				89-0086	PC	31.5	CALM	SE
B160	02/06/89		1408	7.24	1.33				89-0087	PC	31.5	CALM	SE
B160	02/27/89		1456	7.27	0.80				89-0122	CL		7-9	200
B160	02/27/89		1456	7.26	0.80				89-0123	CL		7-9	200
B160	03/02/89		1438	7.31		0.20			89-0253	00	29.0	CALM	
B160	03/02/39		1438	7.29					39-0254	00	29.0	CALM	
B160	03/03/89		1440	6.93	1.02				89-0269	PC 85%	28.0	5-10	180
B160	03/03/89		1440	6.91	1.02				39-0270	PC 85%	28.0	6-10	180
B160	03/13/89		1351	7.49	1,85				89-0285	S 5%	29.0	2-5	320
B160	03/13/89		1351	7.51	1.85				89-0286	S 5%	29.0	2-5	320
B160	04/10/89	1410	1434	8.71	0.72	0.10			89-0321	PC 10%	30.0	5-7	120
B160	04/10/89	1410	1434	8.72	0.72	0.10			89-0322	PC 10%	30.0	5-7	120
B160	05/01/89	1318	1333	6.90	1.05				89-0357	PC 40%	30.0	5-7	180-
B160	05/01/89	1318	1333	6.89	1.05				89-0358	PC 40%	30.0	5-7	180
B160	05/30/89	1224	1241	7.28	0.52	0.10			89-0482	PC 80%	34.0	5-8	20
B160	05/30/89		-		0.52				89-0483	PC 80%	34.0	5-8	20
B160	06/06/89		2014		0.50				89-0516	OC	23.0	CALM	
B160	06/06/89		2014		0.50				89-0517	0C	23.0	CALM	
B160	06/09/89		1148		0.48				89-0548		33.0	8-10	140
B160	06/09/89		1148		0.48				89-0549		33.0	8-10	140
B160	06/26/89		1335		0.54		•		89-0558		29.0	CALM	
B160	06/25/89		1355		0.54				89-0559		29.0	CALM	100
B160 B160	07/10/89 07/10/89		1428 1428	6.25	7.93				89-0594 89-0595		33.0 33.0	0-2 0-2	100 100
B160	07/24/89		1419		5.34				89-0633		26.0	CALM	100
B160	07/24/89		1419		5.34				89-0634		26.0	CALM	
B160	07/25/89				5.45				89-0646		31.0	2-4	80
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	Station	Date	Start Time		pH Std.	Staff Gage	Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Jį	nd
					units	(ft.)	(m)				conditions	€ .	Speed (mph)	Direction
	B160	07/25/89	1317	1337	6.26	6.45	1.55			89-0647	PC 50%	31.0	2-4	30
	B160	07/26/89	1239	1300	5.45	6.65	1.60			89-0660	HZ 50%	31.5		
	B160	07/26/89	1239	1300	6.41	6.65	1.60			89-0661	HZ 50%	31.5		
	B160	07/27/89	1135	1204	6.57	6.90	1.60			89-0670	PC 50%	30.0	4-6	90
	B160	07/27/89	1135	1204	6.59	6.90	1.60			89-0671	PC 50%	30.0	4-6	90
	B160	07/30/89	1325	1358	6.60	7.24	1.30			89-1686	PC 30%	32.0	3-5	20
	B160	07/30/89		1358	6.62		1.80			89-1687	PC 80%	32.0	3-5	20
	B160	07/31/89		1150	5.98	7.78				39-1690	PC 50%	31.0	2-4	. 140
	B160	07/31/89		1150	5.99	. 7.78	2.00			89-1691	PC 50%	31.0	2-4	140
	B160	08/07/89		1336	6.06					89-1702	PC 50%	34.0	CALM	
	B160	08/07/89		1336	6.04					89-1703	PC 50%	34.0	CALM	
	B160	08/21/89		1330	6.51					89-1742	PC 75%	33.0	CALM	
	B160	08/21/89		1330	6.49					89-1743	PC 75%	33.0	CALM	
	B160	09/11/89		1520	6.38	7.66				89-1878	PC 40%	28.0	CALM	
	B160	09/11/89		1520	6.36	7.66				89-1879	PC 40%	28.0	CALM	
	B160	09/25/89		1437	6.93	5.34				89-1860	RAIN	27.5	CALM	
	B160	09/25/89		1437	6.90	5.34				89-1861	RAIN	27,5	CALM	
		09/27/89		1337	6.65	5.44				89-1998	PC 50%	32.0	3-5	80
	B160	09/27/89		1337	6.61		1.60			89-1999	PC 50%	32.0	3-5	80
	B160	10/30/89		1342	7.30					89-2044	,0C	26.0	caim	
	B160	10/30/89		1342	7.24					89-2045	00	26.0	calm.	
	B160	11/13/89		1307	7.25	1.27				89-2080	PC 70%	27.0	6-8	160
	B160	11/13/89		1307	7.24					89-2081	PC 70%	27.0	6-8	160
	B160	12/04/89		1413		01.18				89-2386	CL	18.0	CALM	
	B160	12/04/89		1413		01.18				89-2387	CL	18.0	CALM	
	B170	01/18/89		1700		24.98				89-0072	CL	24.0	CALM	
	B170	01/18/89		1700		24.98				89-0073	CL	24.0	CALM	
	B170	02/06/89		1521		24.98				89-0088	PC		10	SE
	B170	02/06/89 02/27/89		1521		24.98				89-0089	PC			SE
	8170 8170	02/27/89				25.00 25.00				89-0124	CL		5-7	220
	3170	03/02/89		1607		25.00			***	89-0125	CL	00 0	5-7	220
-	B170	03/02/89				25.00				89-0255	00	28.0	CALM	
		03/02/09								89-0256	OC 150	28.0	CALM	100
		03/03/89				25.88 25.88				89-0271 89-0272	PC 15%	27.0 27.0	2-5 2-5	180
		03/03/03				25.00								180
		03/13/89								89-0289 89-0290	PC 10% PC 10%	32.0	3-7	280
		04/10/89				,				89-0325	PC 10%	32.0 33.0	3-7	280
		04/10/89								89-0326	PC 5%	33.0	5-8 5-8	140
		05/01/89												140
		05/01/89		1515							PC 50% PC 50%	29.0 29.0	5-9 5-9	180 180
		06/06/89		2205							PC 30%	21.0	CALM	100
		06/06/89		2205							PC	21.0	CALM	
		06/07/89								,	PC 30%	24.0	3-5	120
		06/07/89									PC 30%	24.0	3-5	120
		06/26/89								89-0562	PC 80%	30.0	ر ب	260
		06/26/89									PC 80%	30.0	5	. 260
			,								- 9 0 0 7 7		J	200

Station	Date	Start		pH Std.		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Vi	nd
					(ft.)			•		conditions	С	Speed (mph)	Direction
B170	07/10/89	1550	1604	6.95		0.25			89-0598	PC 50%	34.0		
B170	07/10/89	1550	1604					,	89-0599	PC 50%	34.0		
B170.	07/24/89	1614	1626	6.47		0.35			89-0637	RAIN	22.0	7-9	140
B170	07/24/89	1614	1626						89-0638	RAIN	22.0	7-9	140
B170	07/25/89	1511	1522	6.45		0.30			89-0650	RAIN	29.0	2-8	80
B170	07/25/89								89-0651	RAIN	29.0	2-8	80
B170	07/26/89		1603	6.58		0.40			89-0666	00	26.0		
B170	07/26/89	1549	1603	5.54		0.40			89-0667	OC	26.0		
B170	07/27/89	1355	1416	6.34		.70			89-1656	PC 85%	31.0	6	140
B170	07/27/89		1416						89-1657	PC 85%	31.0	6	140
B170	07/28/89		1512						89-1668	HZ 60%	35.0	2-4	170
B170	07/28/89		1512						89-1669	HZ 60%	35.0	2-4	170
B170	07/29/89								89-1680			0-6	140
B170	07/29/89		1246						89-1681	PC 60%		0-6	140
B170	08/07/89		1518						89-1706	PC 40%	35.0	3-5	280
B170	08/07/89								89-1707	PC 40%	35.0	3-5	280
B170	08/21/89		2122						89-1746			CALM	
B170	08/21/89		2122						89-1747			CALM	
B170	09/11/89		1733						89-1882		30.0	CALM	
B170	09/11/89		1733						89-1883	PC 60%	30.0	CALM	,
B170	09/25/89		1651						89-1906	RAIN	24.0	CALM	
B170	09/25/89		1651						89-1907	RAIN	24.0	CALM	
B170	09/26/89		1407						89-1920	RAIN	27.0	5	160
B170	09/26/89								89-1921	RAIN	27.0	5	160
B170	09/27/89		1532						89-2002	PC 60%	34.0	4	80
B170	09/27/89		1532						89-2003	PC 60%	34.0	4	80
B170	09/28/89		1401						89-2014	PC 50%	30.5	4-7	80
B170	09/28/89		1401						89-2015	PC 50%	30.5	4-7	80
B170	09/29/89		1453						89-2028	PC 75%	32.0	3-5	100
B170	09/29/89		1453						89-2029	PC 75%	32.0	2-5	100
B170	10/30/89		1536						89-2048	00	25.0	CALM	
B170	10/30/89		1536						89-2049	00	25.0	CALM	100
	11/13/89								89-2083			7-9	120
B170 B170	11/13/89 12/04/89								89-2084 89-2390		26.0 17.0	7-9	120
B170			1556						89-2391	PC 40%	17.0	CALM	
B180	12/04/89 01/18/89		1220		4.70				89-0074	CL CL	11.0	CALM	
B180	01/18/89				4.70				89-0075			CALM	
B180	02/06/89		1600		4.60				89-0090	CL PC	29.0	CALM 5-10	SE
B180	02/06/89		1600		4.60				89-0091	PC	29.0	5-10 5-10	SE SE
B180	02/00/09		1723		4.00				89-0126	CL	21.0	5-8	3E 200
B180	02/27/89								89-0127	CL	21.0	5-8	200
B180	03/02/89								89-0257	OC OC	29.0	CALM	
B180	03/02/89		1635						89-0258	0C	29.0	CALM	
B180	03/03/89		1702						89-0273	PC 20%	28.0	8-10	180
B180	03/03/89								89-0274	PC 20%	28.0	8-10	180
B180	03/13/89				25.02				89-0287		31.0	3-10	280 .

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Station	Date	Start Time		pH std		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Vi	nd
	٠		11110		(ft.)				714.11007	conditions	C	Speed (mph)	Direction
B180	03/13/89	1458	1512	8.75	25.02	0.40			89-0238	CL	31.0	3-10	280
B180	04/10/89		1602		24.94				89-0323	PC 5%	32.0	2-4	160
B180	04/10/89		1602		24.94				89-0324	PC 5%	32,0	2-4	160
B180	05/01/89		1452		24.94				39-0359			5	180
B180	05/01/89		1452		24.94				89-0360				180
B180	05/30/89		1441		24.80				89-0484	PC 60%	33.0	5-7	40
B180	05/30/89		1441		24.80				89-0485	PC 60%	33.0	5-7	40
B180	06/06/89		2136		24.88				89-0518	PC		CALM	
B180	06/06/89		2136		24.88				89-0519	PC		CALM	
B180	06/07/89		0736		24.85				89-0528	PC 40%	26.0	CALM	
B180	06/07/89		0736		24.85				89-0529	PC 40%	26.0	CALM	
B180	06/08/89		1104		24.78				89-0542	PC 80%	31.0	5-9	140
B180	06/08/89		1104		24.78				89-0543	PC 80%	31.0	5-9	140
B180	06/26/89		1449	_	25.84				89-0560	PC 80%	28.0	CALM	
B180	06/26/89		1449		25.84				89-0561	PC 80%	28.0	CALM	
B180	07/10/89		1542		25.91				89-0596	PC 20%	34.0	CHLR	
B180	07/10/89		1542		25.91				89-0597	PC 20%	34.0		
B180	07/24/89		1554		27.65				89-0635	OC THUNDER	29.0	CALM	
B180	07/24/89		1554		27.65				89-0636	OC THUNDER	29.0	CALM	
B180	07/25/89		1500		28.05				89-0648	OC THUNDER	32.0	2-3	80
B180	07/25/89		1500		28.05				89-0649	OC THUNDER	32.0	2-3	80
3180	07/26/89		1540		28.27				89-0664	RAIN	25.0	2-3	
B180	07/26/89		1540		28.27				89-0665	RAIN	25.0		
B180	07/27/89		1344		28.45				89-0672	PC 50%	30.0	CALM	120
B180	07/27/89		1344		28.45				89-0673	PC 60%	30.0	CALM	120
8180	07/28/89		1433		27.99			•	89-1666			CALM	
B180	07/28/89		1433		27.99				89-1667			CALM	
B180	07/29/89		1222		29.25				89-1678	PC 60%	30.0	0-2	120
B180	07/29/89		1222		29.25				89-1679	PC 60%	30.0	.0-2	120
B180	08/07/89		1456		26.70				89-1704	PC 40%	35.5	3-4	300
B180	08/07/89		1456		26.70				89-1705	PC 40%	35.5	3-4	300
8180	08/21/89		2057		26.61				89-1744	OC 40#	25.5	CALM	
B180	08/21/89		2057		26.61				89-1745	00	26.5	CALM	
B180	09/11/89		1710		27.56				89-1880	PC 50%	30.0	0-2	,
B180	09/11/89		1710		27.56				89-1881	PC 50%	30.0	0-2	
B180	09/25/89		1625		27.20				89-1862	RAIN	26.0		
B180	09/25/89		1625		27.20				89-1863	RAIN	26.0		
B180	09/25/89		1342		27.41				89-1918	RAIN	27.0	CALM	
B180	09/26/89		1342		27.41				89-1919	RAIN	27.0	CALM	
B180	09/27/89		1507		27.91			· · · · · · · · · · · · · · · · · · ·	89-2000	PC 60%	33.0	2-3	80
B180	09/27/89		1507		27:91				89-2001	PC 60%	33.0	2-3	80
B180	09/28/89		1333						89-2012	PC 50%	30.0	4-7	100
B180	09/28/89		1333		27.57 27.57				89-2013	PC 50%	30.0	4-7	100
B180	09/29/89		1333		27.39				89-2026	PC 75%	32.0	2-4	100
B180	09/29/89		1428		27.39				89-2027	PC 75%	32.0	2-4	
B180	10/30/89		1518		25.13				89-2046	00	26.0	CALM	
B180	10/30/89		1513		25.13				89-2047		26.0	CALM	
0100	10130103	1444	1010	1.07	40.10	. 0.30			0) 60% I		20.0	UNUM	

Station	Date	Start Time	End Time	-		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Vi	nd
,	٠	11106	111116	units	_				MANITO 6.1	conditions	C . cmb	Speed (mph)	Direction
B180	11/13/89	1445	1457	7.65	24.99	0.40			89-2082	PC 70%	29.0	4-6	120
8180	12/04/89	1527	1535	7.56	24.87	0.10			39-2388	PC 40%	13.0	CALM	
B180	12/04/89	1527	1535	7.60	24.87	0.10			89-2389	PC 40%	18.0	CALM	

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	Station	Date	Dissolved Oxygen, (mg/1)	Temperature, C	Conductivity, (umhos/cm)	Salinity 0/00
	0110	A1 /10 /0A	7 00	10.0	. 440	۸۸
	B110 B110	01/18/89 02/06/89	7.93 6.75	19.0 21.3	440 350	0.0 0.0
	3110	02/27/89	9,75	13.1	445	0.0
ţ	B110	03/02/89	7.55	20.2	443 650	1.0
-	B110	03/02/03	6.50	19.5	375	0.8
_	B110	03/13/89	9.30	18.5	269	0.0
	3110	04/10/89	7.50	22.0	610	1.0
	B110	05/01/89	9.55	23.2	417	0.2
	B110	05/30/89	3.48	27.0	351	0.2
	B110	06/06/89	4.32	27.0	348	0.0
	B110	06/07/89	8.20	29.9	490	1.0
	B110	06/07/89	1.74	24.5	361	0.0
R	B110	06/26/89	5.11	25.1	348	0.8
	B110	07/10/89	2.94	28.0	182	0.0
_	B110	07/24/89	4.34	27.0	163	0.0
	B110	07/25/89	4.23	26.0	176	0.0
	8110	07/25/89	4.85	28.1	199	0.1
-	B110	07/26/89	3.83	27.0	187	0.0
_	3110	08/07/89	4.26	28.0	198	0.1
	B110	08/21/89	4.39	27.0	198	0.0
	3110	09/11/89	4.26	27.5	168	0.0
	B110	09/25/89	4.80	25.0	173	0.1
	B110	09/26/89	4.81.	26.2	161	0.0
	B110	09/27/89	3.95	26.5	170	0.0
	B110	09/28/89	4.30	27.0	170	0.1
2	B110	09/29/89	4.20	27.5	175	0.0
	B110	10/30/89	5.71	22.0	260	0.1
	B110	11/13/89	7.41	21.0	279	0.0
	8110	12/04/89	10.6	14.0	265	0.0
	B120	01/18/89	9.00	17.9	475	0.0
	B120	02/06/89	8.39	20.2	710	0.9
	B120	03/02/89	10.0 7.90	21.0	540	0.0
1	B120	03/03/89		21.2 19.0	600	0.5
	B120 B120	03/13/89 04/10/89	10.4 6.35	23.0	1080 - 700.	1.2
	B120	05/01/89	5.10	24.5	600	0.2
	B120	05/30/89	7.90	23.0	485	0.1
	B120	06/06/89	7.82	24.0	270	0.0
	B120	06/06/89	8.78	23.0	238	0.0
	B120	07/10/89	8.15	28.9	500	0.1
	B120	07/24/89	7.12	30.0	390	0.0
_	B120	07/25/89	5.18	27.0	371	. 0.0
-	B120	08/07/89	3.83 %	29.5	650	0.1
	B120	08/21/89	1.64	23.0	488	0.0
	B120	09/11/89	0.24	27.9	230	0.1
_	B120	09/25/89	3.08	25.0	294	0.1
	B120	09/26/89	2.04	26.0	212	0.0

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Station	Date	Dissolved Oxygen, (mg/1)	Temperature, C	Conductivity, (umhos/cm)	Salinity, o/oo
8120	09/27/89	1.62	26.5	235	0.0
B120	09/28/89	1.20	27.0	255	0.2
B120	09/29/89	0.98	28.0	286	0.1
B120	10/30/89	6.06	22.0	484	0.4
B120	11/13/89	9.25	21.0	430	0.0
B120	12/04/89	12.8	12.0	385	0.1
8130	01/18/89	4.00	21.0	252	0.0
B130	02/06/89	2.90	17.2	300	0.0
B130	02/27/89	7.15	21.9	395	0.0
B130	03/02/89	4.80	21.0	455	0.5
B130	03/03/89	6.20	22.5	430	0.0
B130	03/13/89	4.85	19.0	280	0.0
B130	04/10/89	3.62	24.0	449	0.0
B130	05/01/89	3.60	25.0	430	0.1
B130 B130	05/30/89 06/06/89	2.45 4.34	28.0 28.0	435 441	0.0 0.0
B130	06/07/89	7.40	28.9	570	0.9
B130	06/07/89		28.9	481	0.0
B130	06/09/89	3.25	29.0	484	0.0
B130	06/26/89	6.65	27.0	392	0.9
B130	07/10/89	0.71	29.0	197	0.0
B130	07/24/89	2.49	27.8	175	0.0
B130	07/25/89	2.75	27.0	159	0.0
B130	07/26/89	1.12	26.0	211	0.0
B130	08/07/89	1.60	29.9	200	0.0
B130	08/21/89	1.63	28.0	214	0.1
B130	09/11/89	2.52	29.0	179	0.0
B130	09/25/89	2.40	26.0	182	0.1
B130	09/26/89	1.68	26.8	130	0.0
B130	09/27/89	1.38	27.0	135	0.0
B130	09/28/89	1.63	27.0	165	0.1
B130	09/29/89	1.60	28.0	190	0.0
B130	10/03/89	1.75 2.42	27.5 22.2	171 280	0.0 0.3
B130	10/30/89 11/13/89	4.48	21.0	271	0.3
B130	12/04/89	7.70	15.0	260	0.0
B130 B140	01/18/89	4.70	18.0	210	0.0
B140	02/06/89	5.20	23.3	250	0.7
B140	02/27/89	9.40	17.0	265	0.0
B140	03/02/89	7.30	21.0	292	0.2
B140	03/03/89	7.62	26.0	298	0.1
B140	03/13/89	7.20	20.5	332	0.0
B140	04/10/89	7.50	25.0	370	0.0
B140	05/01/89	5.00	26.5	390	0.1
B140	05/30/89	4.50	29.1	5010	0.4
B140	06/06/89	5.22	29.0	510	0.0
8140	06/07/89	7.40	29.9	690	0.9

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	Station	Date .	Dissolved Oxygen, (mg/1)	Temperature, C	Conductivity, (umhos/cm)	Salinity, 0/00
	٠.					
	2110	0.010.0100	r ca		(10	Λ.Ε
	B140	06/09/89	5.80	29.8	610	0.5 0.9
•	B140 B140	06/26/89 07/10/89		28.0 31.0	580 271	0.9
	B140	07/24/89		29.5	238	0.0
	B140	07/25/89		28.0	231	0.0
_	B140	07/26/89	1.19	27.0	199	0.0
	B140	08/07/89	0.38	31.0	190	0.0
	B140	08/21/89	2.00	29.5	196	0.1
_	B140	09/11/89	1.39	29.9	185	0.0
	B140	09/25/89	2.65	27.0	181	0.1
	B140	09/27/89	2.60	28.0	179	0.0
	B140	10/03/89	0.78	28.5	178	0.0
•	B140	10/30/89	4.60	22.8	189	0.1
	B140	11/13/89	6.30	21.0	, 201	0.1
	B140	12/04/89	09.8	17.0	220	0.1
	B150	01/18/89	8.05	19.2	920	0.0
	B150	02/06/89	8.10	23.0	690	0.8
- .	B150	02/27/89		18.0	780	0.5
_	B150	03/02/89	10.0	21.5	1150	1.0
	B150	03/03/89	6.30	23.0	710	1.0
•	B150	03/13/89	8.35	21.2	550	0.0
_	B150 B150	04/10/89 05/01/89	8.40 7.10	24.0 26.0	1020 [.] 1080	0.0 0.9
	B150	05/30/89		26.1	1190	1.0
	B150	06/06/89		28.0	850	0.5
	B150	06/07/89	5.41	24.6	850	0.9
	B150	06/08/89		27.0	890	0.6
	B150	06/26/89		28.0	880	0.8
	B150	07/10/89		30.5	820	0.5
	B150	07/24/89		29.0	550	0.1
	B150	07/25/89		27.5	580	0.1
	B150	07/26/89		28.8	500	0.1
	B150	08/07/89		29.5	421	0.1
	B150	08/21/89		29.0	525	0.2
•	B150	09/11/89	7.01	29.0	470	0.1
	B150	09/25/89		> 27:0	479	0.2
	B150	09/25/89		27.5	468	0.1
	B150	09/27/89 09/28/89	4.75	27.5 28.0	428 350	$0.0 \\ 0.1$
_	B150 B150	09/29/89	4.30- 5.00	28.0	.350 345	0.0
	B150	10/30/89	3.20	22.5	620	0.3
	B150	11/13/89		22.0	620	0.5
_	B150	12/04/89		13.5	690	0.7
	B160	01/18/89		17.5	220	0.0
	3160	02/06/89		24.1	228	0.6
	B160	02/27/89	9.90	17.8	220	- 0.0
	B160	03/02/89	8.28	22.1	228	0.6

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Station	Date	Dissolved Oxygen, (mg/1)	Temperature, C	Conductivity, (umhos/cm)	Salinity 0/00
B160 B160 B160 B160 B160 B160 B160 B160	03/03/89 03/13/89 04/10/89 05/01/89 05/01/89 06/06/89 06/06/89 06/26/89 07/10/89 07/24/89 07/25/89 08/07/89 08/21/89 09/27/89 10/30/89 11/13/89 12/04/89 01/18/89 02/27/89 03/03/89 11/13/89 11/13/89 12/04/89 01/18/89 02/27/89 03/03/89	Oxygen, (mg/1) 7.85 9.10 9.45 8.14 5.30 4.20 7.00 6.59 1.76 3.45 3.18 2.57 1.79 3.16 2.44 4.18 2.98 8.05 7.43 10.8 11.8 12.1 11.7 11.8 7.70 8.35 11.0 9.60 2.32 3.60 6.92 7.20 6.30 6.85 5.65 5.98 4.75 6.20	C 25.0 21.0 27.0 24.5 30.0 29.0 31.8 29.8 28.5 29.0 31.0 29.5 30.0 27.0 28.0 23.0 26.0 22.5 31.0 31.0 22.5 31.0 32.0 24.0 22.5 31.0 31.0 31.0 32.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0 31.0	(umhos/cm) 600 265 397 439 560 590 520 502 334 260 240 237 191 209 157 170 138 176 190 199 770 720 890 1100 620 265 660 600 580 550 195 221 201 142 159 128 133	0/00 0.5 0.0 0.3 0.1 0.0 0.0 0.1 0.0 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.0
B170 B170 B170 B170 B170 B170 B170 B170	09/25/89 09/26/89 09/27/89 09/28/89 09/29/89 10/30/89 11/13/89 12/04/89 01/18/89	5.22 4.50 4.45 5.10 7.99 7.58 10.0 8.00	27.0 28.0 30.0 30.0 30.0 23.0 23.0 16.0 21.0	179 102 100 100 101 141 176 201 400	9.1 9.0 9.0 9.0 9.0 9.1 9.1

Statio	n Date	Dissolved Oxygen, (mg/1)	Temperature, C	Conductivity, (umhos/cm)	Salinity, 0/00
					•
B180	02/06/39	7.69	24.5	283	0.0
B180	02/27/89	10.2	19.0	421	0.0
B180	03/02/89	10.8 -	23.0	620	1.2
B180	03/03/89	7.55	25:5	900	0.6
B180	03/13/89	15.4	22.5	610	0.5
B190	04/10/89	13.6	27.5	1080	0.0
B180	05/01/89	8.75	22.2	1010	1.2
B180		14.4	31.0	1190	0.5
3180	06/06/89	.6.43	27.8	990	0.5
B180	06/07/89	3.61	26.0	1050	0.8
B180	06/08/89	6.92	29.0	1140	0.8
B180	06/26/89	7.60	29.0	600	0.9
B180	07/10/89	7.40	32.0	720	0.3
B180	07/24/89	5.30	29.0	398	0.1
B180	07/25/89	5.08	28.2	343	0.2
B180	07/26/89	5.48	28.0	322	0.1
B180	08/07/89	4.25	31.5	310	0.1
B180	08/21/89	4.83	30.0	305	0.1
B180	09/11/89	6.20	31.0	329	0.1
B180	09/25/89		27.0	390	0.2
B180	09/26/89	5.75	27.5	231	0.1
B180	09/27/89	4.78	28.0	222	0.0
B180	09/28/89	4.60	29.1	229	0.1.
B180	09/29/89	5.10	29.0	232	0.0
B180	10/30/89	8.98	23.0	460	0.3
B180		10.9	22.5	. 620	0.2
B180	12/04/89	13.6	16.0	640	0.5

Station	Cont.	Date		Diss. NH4-N (mg/1)	Diss. NO2 + NO3-N (mg/1)	-P		Diss. PO4-P [mg/1]		-0	-N
B110	89-0062	01/18/89	0.3	0.063	0.028	0.001	1.5	0.246	14.4	0.1144	0.0096
B110		01/18/89	0.3	0.011	0.028	0.002	1.2				0.0060
B110		02/06/89	0.7	0.057	0.030	0.003	1.0			0.1224	
B110		02/06/89	0.8	0.068	0.031	0.002	1.0			0.1068	
B110	89-0114	02/27/89	<0.2	0.008	0.015	0.001	0.6		15.3	0.0730	0.0020
B110 .	89-0115	02/27/89	<0.2	0.050	0.015	0.001	0.8	0.091	15.6	0.0532	0.0012
B110	89-0277	03/13/89	1.0	0.014	0.011	0.005	1.4	9.125	14.1	0.0696	0.0032
B110		03/13/89	1.6	0.010	0.011	0.002	1.2	0.124	16.0	0.0832	0.0032
B110		04/10/89	0.6	0.021		<0.001	0.9			0.1808	
B110		04/10/89	0.6	0.020		<0.001	1.0	0.127		0.1132	0.0100
B110		05/01/89	3.0	0.010	0.010	0.005	1.8		16.0		
B110		05/01/89	2.5	0.030	0.010	0.005	1.7	0.123	16.3		
B110		05/30/89	0.5	0.062	0.006	0.025	1.3	0.251			0.0204
B110		05/30/89	1.1		<0.005	0.026	1.3	0.257		0.0924	
B110 B110		06/06/89 06/06/89	1.7 2.6	0.101	0.042	0.010 0.007	1.8 2.1	0.202			0.0364
B110		06/07/89	0.7		<0.005	0.001	1.0	0.213		0.2160	
B110		06/07/89			<0.005	0.007	1.1	0.208		0.1856	
B110		06/07/89	1.0	0.026	0.008	0.012	1.5	0.196		0.7976	
B110		06/07/89	4.1	0.025	0.007	0.006	1.7	0.195		0.3028	
. B110		06/26/89	3.9		<0.005	0.009	3.9				0.0680
B110		06/26/89	4.0		<0.005	0.008	3.8	0.153		0.3260	
B110		07/10/89	0.9	0.100	0.007	0.004	0.9		30.2		
B110	89-0587	07/10/89	0.8	0.096	800.0	0.003	1.0	0.428	32.8	0.1776	0.0140
B110		07/24/89	2.2	0.234	0.072	0.008	2.9	0.792	27.4		
B110		07/24/89	1.0	0.239	0.076	0.006		0.778	26.6		
B110		07/25/89	1.0	0.118	0.030	0.007	1.5	0.526	23.7		
B110		07/25/89	2.7	0.107	0.029	0.005	1.7		22.7		
B110		07/25/89	1.5	0.074	0.025	0.004	1.7		24.1	•	
B110		07/25/89	0.9	0.125	0.024	0.004	1.5	0.498	23.5		
B110		07/26/89	0.6	0.036	0.017	0.004	1.1		29.2		
B110		07/26/89	0.6	0.036	0.016 0.021	0.003	1.1	0.444	27.3 29.1		
B110 B110		07/27/89	0.5 0.9	0.058 0.025	0.019	0.002 0.00 4	1.2	0.417	29.1		
8110		07/28/89	1.0	0.023	0.019	0.004	1.2	0.413	26.2		•
. B110		07/28/89	1.1	0.024	0.014	0.004	1.2	0.356	22.7		
B110		07/29/89	0.4	0.018	0.021	0.003		0.338	23.3		
B110		07/29/89	0.8	0.025	0.021	0.003	1.1	0.342	23.9		
B110		08/07/89	0.8	0.015	0.019	0.004	1.6	0.261	27.5		
B110		08/07/89	0.8	0.020	0.020	0.003	1.7	0.258	24.6		
B120		01/18/89	1.2		<0.005	0.009	2.7	0.291		0.1600	0.0148
B120		01/18/89	0.5		<0.005	0.008	2.6	0.295	15.8	0.1600	0.0148
B120		02/06/89	1.5	0.026	0.009	0.012	3.1	0.213		0.2392	
B120		02/06/89	1.6	0.029	0.007	0.016	3.3	0.221		0.2776	
B120		02/27/89	1.1	0.048	0.007	0.030	2.2	0.260		0.6940	
B120		02/27/89	3.9	0.016	0.007	0.014	2.6	0.262		0.7512	
B120	97-0219	03/13/89	1.0	<0.000	<0.005	0.013	2.1	0.168	14.1	0.1244	0.0120

Station	Cont.	Date	Solids Total Susp. (mg/1)		Diss. NO2 + NO3-N (mg/1)	Part. -P (mg/1)		Diss. PO4-P (mg/1)	Diss. OrgC (mg/1)	Part. -C (mg/1)	Par -N (mg/
8120	89-0276	03/13/89	0.8	<0.005	<0.005	0.011	1.9	0.165	14.4	0.1276	0.01
B120	89-0311	04/10/89	12.8	0.023	0.010	0.081	9.3	0.346		1.9594	
B120		04/10/89	11.4	0.027	0.007	0.084	9.2			2.0269	
8120		05/01/89			<0.005		17.7			2.9854	
8120		.05/01/89	20.7		<0.005	0.148	17.2			3.4246	
B120		06/06/89		0.528	0.129		150.0	0.200		14.256	
8120		06/06/89		0.527	0.126	0.502	140.0	0.200		13.902	
B120		06/06/89	66.3		0.133	0.189	68.5	0.211		5.1680	
B120		06/06/89	71.3	0.535		. 0.196	70.5	0.212		4.0840	
B120		07/10/89	16.2		<0.005		18.3			5.4200	
B120		07/10/89	14.4		<0.005		18.6	0.372		5.3027	1.19
8120		07/24/89	6.6		<0.005		8,6	0.423	17.4		
B120		07/24/89	7.3		<0.005		8.6	0.423	16.8		
B120		07/25/89	6.6		<0.005		10.3	0.608	16.8		
B120		07/25/89	6.7		<0.005	0.156	9.9	0.610			
B120		08/07/89	5.4	0.015	0.019	0.288	15.6	0.435	30.9		
		08/07/89	8.6	0.017	0.018	0.318	15.1	0.444	31.3		
B130		01/18/89	2.7	0.037	0.019		3.4			0.8348	
B130		01/18/89	2.5	0.056	0.010	0.012	3.6	0.242		0.7232	
B130		02/06/89	2.1	0.069	0.021	0.008	2.2	0.243		0.4268	
B130		02/06/89	1.6	0.071	0.030		2.1			0.3884	
B130		02/27/89		0.031	0.014		2.1			0.3668	
B130 ·		02/27/89	1.7	0.028	0.015			0.142		0.3840	
B130		03/13/89	0.8	0.011		0.004	1.2			0.2016	
B130		03/13/89 04/10/89	1.6 1.5	0.013	0.012	0.004		0.226		0.1704 0.3556	
B130 B130		04/10/89	1.3	0.035	0.010	0.007	1.4 1.2			0.3588	
B130		05/01/89	1.4		<0.005	0.007	1.3			0.4084	
B130		05/01/89	1.8		<0.005	0.009	1.3	0.226		0.4148	
B130		05/30/89	1.9		<0.005		1.6	0.244		0.4140	
B130		05/30/89	1.3		<0.005		1.2	0.242		0.4368	
B130		06/06/89	4.1	0.052	0.018	0.024	3.1			1.4740	
B130		06/06/89	5.4		0.023			0.227		1.7464	
B130		06/07/89			0.012			0.219		1.4152	
B130		06/07/89	3.5		0.014			0.219		1.5580	
B130		06/07/89	3.1		<0.005			0.201		1.0664	
B130		06/07/89	2.5		<0.005			0.198		1.0184	
B130		06/09/89	3.9		<0.005			0.227		1.1768	
B130		06/09/89			<0.005			0.223		1.2100	
B130		06/26/89	1.2	0.088	0.154	0.011		0.170		0.1936	
B130		06/26/89	1.3	0.077	0.145			0.169		0.2188	
B130		07/10/89	1.9	0.094	0.007			0.483		0.3880	
B130		07/10/.89	1.7	0.098	0.006			0.460		0.3940	
B130		07/24/89	2.7	0.085	0.034		4.0	0.592	29.7		
B130	89-0628	07/24/89	2.1	0.088	0.034	0.012	3.5	0.574	27.9		
B130	89-0640	07/25/89		0.080	0.038		3.5	0.584			
B130	89-0641	07/25/89	3.8	0.078	0.033	0.014	3.5	0.614	27.4		

Station	Cont.	Date	Total	Diss. NH4-N (mg/1)	Diss. NO2 + NO3-N (mg/l)	Part. -P (mg/1)				-C	Part. -N (mg/1)
B130	89-0656	07/26/89	2.1	0.066	0.030	0.006	3.1	0.558	26.9		
B130		07/26/89	2.1	0.060	0.030	0.008	2.9	0.544	31.3		
B130		07/28/89		0.039	0.018	0.009		0.457	25.4		
B130		07/28/89	1.9	0.033	0.018	0.008	3.7	0.457	28.3		
8130		07/29/89	1.5	0.034	0.020	0.008	2.5	0.454	24.2		
B130	89-1673	07/29/89	0.7	0.046	0.019	0.008	2.2	0.458	25.3		
3130	89-1682	07/30/89	1.7	0.060	0.018	0.009	2.5	0.461	29.1		
B130	89-1683	07/30/89	1.9	0.050	0.019	0.008	2.5	0.446	28.1		
3130	89-1696	08/07/89	1.2	0.056	0.026	0.007	2.3	0.324	28.1		
B130		08/07/89	1.1	0.033	0.021	0.008	2.6	0.328	25.2		
B140		01/18/89	0.4	0.028	0.070	0.007	1.1	0.366			0.0496
B140		01/18/89	<0.2	0.029	0.065	0.008	1.1	0.364			0.0540
3140		02/06/89	<0.2	0.028	0.027	0.018	2.3	0.290			0.1040
		02/06/89	1.6	0.030	0.022	0.006	1.9	0.290			0.0276
B140		02/27/89	0.4	0.022	0.012	0.002	1.3	0.154			0.0112
3140		02/27/89	0.3	0.010	0.011	0.002	0.6	0.154			0.0092
B140 B140		03/13/89 03/13/89	0.5 0.5		<0.005 <0.005	0.008 0.005	0.9	0.163			0.0400 0.0452
B140 B140		03/13/09	0.3	0.008	0.009	0.003	1.0 0.6	0.103			0.0432
B140		04/10/89	0.4		<0.005	0.003	0.6	0.102			0.0304
8140		05/01/89	0.9		<0.005	0.005	0.4	0.072			0.0184
B140		05/01/89	0.5	<0.005		0.005	0.6	0.071			0.0216
B140		05/30/89	0.6		<0.005	0.007	0.4	0.069			0.9604
B140		05/30/89			<0.005	0.007	0.5	0.072			0.0680
B140		06/06/89	1.3		<0.005	0.007	0.9	0.077			0.0448
B140		06/06/89	1.5		<0.005	0.008	0.9	0.081			0.0348
B140	89-0538	06/07/89	1.1	0.014	<0.005	0.009	0.8	0.082	16.0	0.2912	0.0276
B140	89-0539	06/07/89	1.0	0.009	<0.005	0.006	0.9	0.080			0.0256
B140		06/09/89	0.7		<0.005	0.008	0.8	0.091			0.0504
B140		06/09/89	0.9		<0.005	0.008	0.6	0.096			0.0488
B140		06/26/89	0.8		<0.005	0.007	0.9	0.115			0.0664
B140		06/26/89	0.3		<0.005	0.006	1.0	0.120			0.0464
B140		07/10/89			<0.005			0.476			0.1720
B140		07/10/89	2.7			0.033	2.9			0.8028	0.1012
B140		07/24/89		0.156	0.012	0.041	3.0		23.0		
B140 B140		07/24/89	2.6	0.142	0.012	0.062	2.6	0.413	24.0		
B140 B140		07/25/89 07/25/89	7.1 1.8		0.013	0.040	1.5 1.3	0.422 0.417	23.4 23.8		
B140		07/26/89	2.1	0.126	0.013	0.013	1.4	0.426	27.8		
B140		07/26/89	3.0			0.017	1.3		23.5		
B140		07/28/89	1.1	0.119				0.477	27.4		
B140		07/28/89	2.3		0.010		2.3	0.468	25.3		
B140		07/29/89	1.2		0.012	0.015	1.4		26.1		
B140		07/29/89	1.2	0.147		0.012	1.1	0.483	25.4		
B140		07/30/89	1.3			0.013		0.489	27.4		
B140		07/30/89	1.6		0.010		1.3	0.494	28.4		
B140	89-1688	07/31/89	1.3	0.124	0.014	0.011	1.2	0.463	23.3		

Station	Cont.	Date	Solids Total Susp. (mg/1)		Diss. NO2 + NO3-N (mg/1)	Part. -P (mg/l)	Turb. NTU	Diss. PO4-P (mg/1)	Diss. OrgC (mg/1)	Part. -C (mg/1)	-N
B140	89-1689	07/31/89	1.1	0.125	0.014	0.011	1.2	0.467	25.4		
B140	89-1698	08/07/89	6.3	0.115	0.011	0.011	1.9	0.466	27.7		
B140	89-1699	08/07/89	0.4	0.116	0.011	0.011	1.0	0.484	29.2		
B150		01/18/89	0.9	0.035	0.231	0.011	3.5	0.162		0.1844	
8150		01/18/89	0.9	0.140	0.272	0.009	3.8	0.159		0.1408	
B150		02/06/89		. 0.047	0.120	0.008	3.3	0.140		0.1372	
3150		02/06/89	0.7	0.037	0.115	0.007	3.8	0.133		0.0996	
B150		02/27/89	1.2	0.019	0.805	0.007	2.9	0.069		0.2572	
B150		02/27/89	1.1	0.037	0.805	0.008	2.6			0.1732	
B150		03/13/89	1.6	0.038	0.590	0.009	3.3			1.2156	
B150		03/13/89	2.5	0.039	0.595	0.017	3.3	0.146		1.9664	
3150 3150		04/10/89 04/10/89	1.1	0.029	0.008	0.031	1.1	0.104 0.107		0.6492	
B150		04/10/89	2.9	0.022	0.013	0.003 0.012	1.1	0.107		0.2408	
B150		05/01/89	2.2	0.066	0.013	0.012	1.0	0.121		0.2692	
B150		05/30/89	1.1		<0.005	0.036	1.3			0.8224	
B150		05/30/89	3.1		<0.005	0.016	1.8	0.159		0.2160	
B150		06/06/89	1.7	0.052	0.552	0.013	1.9			0.2832	
3150		06/06/89		0.057	0.550	0.006	1.6			0.1812	
3150		06/07/89	1.5	0.105	0.736	0.005	1.4			0.1024	
		06/07/89	0.5	0.110	0.736	0.005	1.1			0.0920	
B150	89-0540	06/08/89	1.4	0.066	0.816	0.009	1.8	0.146	17.5		
150	89-0541	06/08/89	1.5	0.063	0.812	0.015	1.8	0.143	17.2	0.3020	0.0432
150	89-0556	06/26/89	2.1	0.080	0.312	0.012	2.8	0.336	18.1	0.2148	0.0504
150		06/26/89	0.8	0.085	0.316	0.012	2.6			0.2008	
3150		07/10/89	2.1	0.064	1.411	0.016	2.4	0.198		0.6104	
8150		07/10/89	3.6	0.058	1.428	0.015	2.6	0.195		0.6872	0.0728
3150		07/24/89	1.4	0.053	0.142	0.011	2.1	0.245	22.2		
3150		07/24/89	2.9	0.056	0.140	0.011	1.9		26.3		
3150		07/25/89	1.3	0.055	0.167	0.011	1.9		24.4		
3150 3150		07/25/89	1.8	0.069	0.174	0.012		0.237	21.9		
		07/26/89	2.5	0.046	0.080	0.013	$\frac{2.1}{2.1}$		27.6		
3150 3150		07/26/89 07/28/89	2.5 3.1	0.046 0.018	0.080 0.149	0.013 0.048	2.1 3.0	0.274	27.3 28.2		
3150		07/28/89	2.4	0.019	0.152	0.104	3.2	0.313	26.5		•
3150		07/29/89	2.4		0.137	0.015	2.7	0.568	24.2		
3150		07/29/89	2.5	0.047	0.137	0.013	2.5		22.8		
B150		08/07/89	1.5	0.037	0.217	0.012	2.3		29.2		
B150		08/07/89	1.4	0.035	0.218	0.011	2.4		31.2		
3160		01/18/89	3.1	0.053	0.083	0.008	3.0		19.6	0.6964	
3160	89-0071	01/18/89	3.5	0.059	0.081	0.008	2.9	0.352	21:4	0.5996	0.0496
B160		02/06/89	0.8	0.053	.0.057	0.005	0.8	0.320	18.4	0.2856	0.0232
3160		02/06/89	1.3	0.055	0.057	0.006	1.0	0.312		0.2932	
	89-0122	02/27/89	0.4	0.024	0.039	0.003		0.181		0.1744	
							۸ ۸	0 105			
B160 B160		02/27/89	0.8	0.064	0.035	0.003	0.9			0.2152	
	89-0285	02/27/89 03/13/89 03/13/89	0.8 4.5 4.2	0.064 0.012 0.016	0.035 0.009 0.007	0.003 0.005 0.006	9,9 1,2 1,1	0.146	14.5	0.2152 0.4276 0.6344	0.0320

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Station	Cont.	Date	Total		NO2 +			PO4-P	Diss. OrgC (mg/l)	-C	Part. -N (mg/1)
B160 B160 B160 B160 B160 B160 B160 B160	89-0322 89-0357 89-0358 89-0482 89-0516 89-0517 39-0548 89-0549 99-0558 89-0559	04/10/89 04/10/89 05/01/89 05/01/89 05/30/89 05/30/89 06/06/89 06/06/89 06/09/89 06/09/89 06/26/89	3.1 5.3 5.0 8.1 9.3 3.1 2.6 3.8 4.7 8.7	0.038 0.012 0.006 0.325 0.250 0.110 0.070 0.072 0.118 0.135	0.015 0.016 <0.005 <0.005 0.014 0.013 0.029 0.028 0.036 0.037 0.027	0.009 0.007 0.089 0.089 0.037 0.013 0.013 0.020 0.020 0.032	1.0 1.9 1.9 3.5 4.2 2.0 2.1 2.4 3.8 2.4 2.1	0.219 0.374 0.370 0.266 0.270 0.227 0.227 0.101 0.101	12.1 16.5 16.4 17.9 17.0 14.9 16.6 19.4 17.9 14.8 15.5	0.4480 1.1576 1.1156 1.5568 1.5936 0.8920 0.5160 0.6780 0.6824 1.2180 1.4316	0.4072 0.1240 0.0608 0.1252 0.1280 0.2216 0.2732
B160 B160 B160 B160	89-0595 89-0633 89-0634 89-0646 89-0660 89-0661 89-0670 89-1686 89-1687 89-1687 89-1690 89-1691 89-1702	07/10/89 07/10/89 07/24/89 07/25/89 07/25/89 07/25/89 07/26/89 07/27/89 07/27/89 07/30/89 07/30/89 07/31/89 08/07/89	2.0 2.4 2.1 1.9 1.5 1.1 1.3	0.055 0.124 0.084 0.136 0.117 0.127 0.129 0.160 0.077 0.067 0.067 0.088	0.010 0.010 0.013 0.011 0.013 0.012 0.012	0.056 0.057 0.020 0.021 0.019 0.013 0.011 0.012 0.011 0.011 0.011 0.009 0.008	2.2 2.0 1.9 1.4 1.6 2.1 1.6 1.5 1.4 1.5 1.9 1.3	0.418 0.417 0.418 0.432 0.432 0.442 0.463 0.468 0.428 0.429 0.436	28.8 24.2 23.2 24.7 23.4 28.0 27.7 26.6 28.5 25.4 25.6 27.4 23.9		0.3150
B160 B170 B170 B170 B170 B170 B170 B170 B17	39-0072 89-0073 89-0088 39-0089 89-0127 89-0127 89-0289 89-0325 89-0361 89-0362 89-0362 89-0521 89-0521 89-0530 89-0531 89-0542 89-0542	08/07/89 01/18/89 01/18/89 02/06/89 02/06/89 02/27/89 02/27/89 03/13/89 04/10/89 05/01/89 05/01/89 06/06/89 06/06/89 06/07/89 06/08/89 06/08/89	1.5 1.3 5.6 2.0 1.8 1.3 1.9 2.2 4.3 5.8 10.2 3.0 4.2 7.7	0.008 9.017 0.023 0.036 0.030 0.027	0.011 0.055 0.052 0.055 0.009 0.008 0.022 0.020 0.010 0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005	0.008 0.002 0.002 0.006 0.007 0.053 0.061 0.027 0.056 0.165 0.165 0.129 0.624 0.848 0.127 0.148 0.003 0.005 0.005	4.5 3.5 3.6 3.0 3.4 3.8 5.9 3.1 5.3 5.9 0.5	0.156 0.171 0.166 0.228 0.237 0.235 0.236 0.234 0.205 0.198 0.141 0.139	12.5 13.6 16.5 14.9 14.8 16.4 20.9 11.8 12.0 11.9 12.3 15.5 13.8 15.1 15.2 16.8 17.7	0.0824 0.0936 0.0888	0.0216 0.0196 0.0172 0.0188 0.0260 0.0252 0.0492 0.0348 0.1560 0.3088 0.0364 0.0532 0.0056 0.0064

Station	Cont.		Total	NH4-N (mg/1)	NO2 +	Part. -P (mg/1)		204-P	Diss. OrgC (mg/1)	-0	-N
B170	89_0563	06/26/89	5.1	0.127	0.280	0.090	5.9	0.680	21.8	1.5568	0 4588
B170		07/10/89		0.193			5.6			0.9116	
B170		07/10/89		0.160	0.023		6.3			0.8880	
B170		07/24/89		0.091			4.9		28.6		
B170		07/24/89		0.082	0.079			0.141	26.1		
B170		07/25/89		0.063	0.059		3.9		27.1		
B170		07/25/89		0.110	0.057		3.9		28.7		
B170		07/26/89		0.052			3.7	0.148	27.6		
B170		07/26/89		0.053		0.019	3.7		30.8		
B170		07/27/89		0.060	0.039	0.022	3.2	0.123	31.7		
B170	89-1657	07/27/89	3.0	0.052	0.038	0.013	3.3	0.121	31.2	4.	
B170	89-1668	07/28/89	2.6	0.037	0.030	0.019	3.2		26.6		
B170	89-1669	07/28/89		0.038			3.4		28.0		•
B170		07/29/89		0.041			2.9		26.2		•
B170		07/29/89		0.093			1.1		- 32.7		
B170		08/07/89		0.032			3.5		30.2		
B170		08/07/89		0.032			3.8		30.0		
B180		01/18/89		0.012			7.6				0.0168
B180		01/18/89		0.012			7.7				0.0132
		02/06/89		0.049			6.0				0.0136
B180 ·		02/06/89		0.070			6.0				0.0164
B180		02/27/89		0.010			1.2				0.0012
B180		02/27/89		0.013			1.1			0.0956	
B180 B180		03/13/89 03/13/89		<0.005			1.4 2.7			0.0576	0.0064
B180		03/13/09		<0.005	0.009		0.6			0.1344	
B180		04/10/89			<0.005		0.6			0.1112	
B180		05/01/89				0.012		0.123			0.0072
B180		05/01/89		<0.005			0.5			0.1300	
B180		05/30/89			<0.005		0.6				0.0432
B180		05/30/89			<0.005		0.4				0.0304
B180		06/06/89			<0.005		1.5				0.0692
B180		06/06/89		0.018	<0.005				- 13.9		
B180		06/07/89		0.008	<0.005		0.5	0.312	13.5	0.1292	0.0140
8180	89-0529	06/07/89	2.5	0.015	<0.005	0.007	0.5		13.3	0.1448	0.0140
B180	89-0560	06/26/89	1.5	0.061	0.117	0.010	1.9	0.258	17.9	0.3104	0.0640
B180		06/26/89			0.139		1.9		23.9	0.1864	0.0396
B180		07/10/89		0.046			2.5				0.0595
B180		07/10/89		0.042			2.3			0.4448	0.0435
B180		07/24/89		0.036			3.5		27.2		
B180-		07/24/89		0.039			3.5		26.5		
B180		07/25/89		0.037			3.1		26.8	+.	
B180		07/25/89		0.036			3.0		. 29.9		
B180		07/26/89		0.039			3.4		33.8		
B180		07/26/89		0.045			3.7		30.3	•	
B180		07/27/89		0.028			3.3				
B180		07/27/89		0.028			2.8		34.4		

Station	Cont.	Date	Solids Total Susp. (mg/1)	Diss. NH4-N (mg/1)	Diss. NO2 + NO3-N (mg/1)	Part. -P (mg/1)		P04-P	Diss. OrgC (mg/1)		-N
3180	89-1666	07/28/89	3.1	0.030	0.082	0.028	3.3	0.280	.31.5		
3180	89-1667	07/28/89	2.5	0.052	0.081	0.027	3.1	0.275	30.7		
3180	89-1678	07/29/89	4.4	0.037	0.079	0.030	4.9	0.155	24.2		
B180	89-1679	07/29/89	4.9	0.043	0.078	0.028	4.8	0.153	25.8	•	•
B180	89-1704	08/07/89	3.2	0.061	0.114	0.032	4.0	0.342	33.0		
B180	89-1705	08/07/89	3.0	0.064	0.115	0.031	4.0	0.344	33.9		

	Station	Date	Start Time		pH Std.		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Wi	nd
						(ft.)			÷		conditions	C	Speed (mph)	Direction
	E210	01/17/89	1028	1053	7 90		2 50	RISING	NO	89-0050	CL	23.0	0-5	Sw
		02/07/89		1135				RISING	NO	89-0092	PC 15%	26.0	7-10	SE
		02/07/89		1135				RISING	NO	89-0093	PC 15%	26.0	7-10	SE
		02/28/89		1131				RISING	NO	89-0128	PC 95%	26.5	5	180
		02/28/89		1131				RISING	NO NO	89-0129	PC 95%	26.5	5	180
		03/14/89 03/14/89		1158 1158				RISING RISING	. NO . No	89-0291 89-0292	HZ HZ	24.0 24.0	4-5 4 - 5	140 140
		04/11/89		1148				RISING	NO	89-0327	PC 55%	25.5	8-10	
		04/11/89		1148				RISING	NO	89-0328	PC 55%	25.5	8-10	220
		05/02/89		0944				RISING	NO	89-0363	PC 20%		8	340.
	E210	05/02/89	0920	0944				RISING	NO	89-0364	PC 20%		8	340
		05/31/89		1034	_			RISING	NO	89-0486	PC 30%	29.0	8-10	100
		05/31/89		1034				RISING	NO .	89-0487	PC 30%	29.0	9-10	100
		06/27/89		0943				RISING	NO	89-0566	RAIN	27.0	CALM	
		06/27/89 07/11/89		0943 1210				RISING FALLING	NO NO	89-0567 89-0600	RAIN PC 20%	27.0 32.0	CALM 5	160
		07/11/89		1210				FALLING	NO NO	89-0601	PC 20%	32.0	5	160
		08/08/89		1357				RISING	YES	89-1708	PC 60%	32.0	8	240
		08/08/89		1357				RISING	YES	89-1709	PC 60%	32.0	8	
		08/08/89		1357	7.87		2.50	RISING	YES	89-1710	PC 60%	32.0	8	240
		08/08/89		1357				RISING	YES	89-1711	PC 60%	32.0	8	240
		08/24/89		0757				RISING	NO	89-1748	PC 10%	26.0	6	. 90
		08/24/89		0757				RISING	NO	89-1749	PC 10%	26.0	6	. 90
		09/12/89 09/12/89		1056 1056	-			RISING RISING	NO NO	89-1884 89-1885	PC 10% PC 10%	31.0	11 11	90 90
	E210	10/31/89		1041				SLACK-L		89-2050	FOG, PC 10%	22.0	5	120
	E210	10/31/89		1041				SLACK-L		89-2051	FOG, PC 10%	22.0	5	120
	E210	11/20/89		1147				FALLING		89-2356	PC 60%	24.0	2-3	135
	E210	11/20/89		1147		,		FALLING		89-2357	PC 60%	24.0	2-3	135
	E210	12/05/89		1117				FALLING	the second secon	89-2393	CL	18.0	CALM	
	E210	12/05/89		1117				FALLING		89-2394	CL DC 200	18.0	CALM	100
	E215 E215	09/12/89 09/12/89		1135				RISING RISING	YES YES	89-1386 89-1887	PC 30%	29.0 29.0	6-8 6-8	100 100
	E215	09/12/89						RISING	YES	89-1888			6-8	100
		09/12/89						RISING	YES	89-1889	PC 30%	29.0	6-8	100
		01/17/89		1135	7.63		2.70	RISING	NO	89-0051	CL	23.0	CALM	
		02/07/89						RISING	NO	89-0094		28.5	6-8	SE
		02/07/89		1218				RISING	NO	89-0095		28.5	6-8	SE
	E220	02/28/89		1210				RISING	NO NO	89-0225		20.0	8-10	200
	E220 E220	02/28/89		1210				RISING RISING	NO	89-0226 89-0293	PC 80%	23.5	8-10 8-9	200
	E220	03/14/89 03/14/89		1228 1228				RISING	NO NO	89-0294	CL CL		8-9	220 220
	E220	04/11/89		1231				RISING.	NO	89-0329	PC-85%	30.0	2-5	220
	E220	04/11/89		1231				RISING	NO	89-0330	PC 85%	30.0	2-5	220
	E220	05/02/89		1027				RISING	NO	89-0365	PC 40%	25.0	9	340
	E220 .	05/02/89		1027				RISING	NO	89-0366		25.0	9	340
•	E220	05/31/89	1052	1108	7.66		2.50	RISING	NO	89-0488	PC 25%	29.0	7	100

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Station	Date	Start Time			Staff Gage	Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp	Vi	nđ
			•		(ft.)			e .		conditions	c c	Speed (mph)	Direction
E220	05/31/89	1052	1108	7.69		2.50	RISING	NO	89-0489	PC 25%	29.0	7	100
E220	06/27/89	0850	0909	7.53		2.80	RISING	NO	89-0564	RAIN	25.0	6	140
E220	06/27/89	0850	0909	7.61		2.80	RISING	NO	89-0565	RAIN	25.0	6	140
E220	07/11/89	1225	1236	8.19		1.40	FALLING	NO	89-0602		34.0	CALM	
E220	07/11/89		1236	8.28		1.40	FALLING	NO	89-0603		34.0	CALM	
E220	08/08/89	1416	1434	7.13		2.20	RISING	NO	89-1712	PC 50%	34.0	9-10	270
E220	08/08/89		1434	7.20		2.20	RISING	NO	89-1713	PC 50%	34.0	9-10	270
E220	08/24/89	0812	0827	7.32		2.40	RISING	NO	89-1750	PC 20%	26.0	5	90
E220	08/24/89		0827	7.35		2.40	RISING	NO	89-1751		26.0	5	90
E220	09/12/89	1143	1158	7.21		2.80	RISING	NO	89-1890	PC 40%	32.0	8	60
E220	09/12/89			7.50		2.80	RISING	NO	89-1891		32.0	. 8	60
E220	10/31/89			7,46		2.00	SLACK-L	NO	89-2052	PC 40%	26.5	5	120
E220	10/31/89		1115	7,47		2.00	SLACK-L	NO	89-2053		26.5	5	120
E220	11/20/89		1219	7.84		2.30	FALLING	NO		PC 40%	23.0	CALM	
E220	11/20/89	1205	1219	7.84		2.30	FALLING	МО	89-2359		23.0	CALM	
E220	12/05/89		1148	7.60		1.30	FALLING	NO		PC 30%	22.0	CALM	
E220	12/05/89		1148	7,65		1.80	FALLING	NO	89-2396		22.0	CALM	
E230	01/17/89		1205	7.74		1.70	RISING	NO	89-0052	CL	21.0	5	NO
E230	02/07/89		1245	7.75		1,45	RISING	NO	89-0096	PC 15%	28.0	6-8	SE
E230	02/07/89		1245				RISING	NO	89-0097		28.0	6-8	SE
E230	02/28/89		1242	8.35		1.90	RISING	NO	89-0227	PC 60%	24.0	8-10	200
E230	02/28/89		1242	8.34		1.90	RISING	NO	89-0228		24.0	8-10	200
E230	03/14/89	1235	1249	7.83		2.05	RISING	NO	89-0295	CL		7-9	180
E230	03/14/89	1235	1249	7.30		2.05	RISING	NO	89-0296	CL		7-9	180
E230	04/11/89	1240	1307	7.62		1.80	RISING	NO	89-0331	PC 80%	30.0	5-8	240
E230	04/11/89	1240	1307	7.57		1.80	RISING	NO	89-0332	PC 80%	30.0	5-8	240
E230	05/02/89	1041	1100	7.63		1.60	RISING	NO	89-0367	PC 40%	26.0	10	. 34
E230	05/02/89	1041	1100	7.56		1.60	BISING	NO	89-0368	PC 40%	26.0	10	34
E230	05/31/89	1118	1134	7.67		1.30	RISING	NO	89-0490	PC 20%	30.5	8	100
E230	05/31/89	1118	1134	7.66		1.80	RISING	NO	89-0491	PC 20%	30.5	8	100
E230	06/27/89	1010	1019	7.46		2.00	RISING	NO	89-0568	PC 30%		CALM	
E230	06/27/89	1010	1019	7.42		2.00	RISING	NO	89-0569			CALM	
.E230	07/11/89	1250	1302	8.42		1.30	FALLING	NO	89-0604		33.0	4	160
E230	07/11/89		1302		·		FALLING	NO	89-0605		33.0	4	160
E230	08/08/89	1447	1508	7.15		1.50	RISING	YES	89-1714	PC 40%	34.0	6-7	280
E230	08/08/89	1447	1508	7.14		1.50	RISING	YES	89-1715	PC 40%	34.0	6-7	280
E230	08/08/89	1447	1508	7.01		1.50	RISING	YES	89-1716	PC 40%	34.0	6-7	280
E230	08/08/89	1447	1508	7.01		1.50	RISING	YES	89-1717	PC 40%	34.0	6-7	280
E230	08/24/89		0848	7.14		2.00	RISING	NO	89-1752	PC 25%	28.5	6	90
E230	08/24/89		0848				RISING	NO	89-1753	PC 25%	28.5	6	90
E230	09/12/89		1221				RISING	NO	89-1892	PC 40%	33.0	5-6	80
E230	09/12/89		1221				alsing	NO	89-1893	PC 40%	33.0	5-6	80
E230	10/31/89		1135	7.21		1.30	SLACK-L		89-2054	PC 40%	26.0	CALM	
E230	10/31/89		1135				SLACK-L	NO	89-2055	PC 40%	26.0	CALM	
E230	11/20/89		1240				FALLING	NO	89-2360	PC 30%	24.6		
E230	11/20/89		1240				FALLING		89-2361		24.5		
E230	12/05/89	1157	1208	7.45		1.20	FALLING	CM	89-2397	PC 45%	18.0	6	340

3

:	Station	Date	Start Time				Depth, Total	Tide	Stratified	Cont. Number	Weather general conditions		Air Temp	-Wi Speed	nd - Direction
						(,	/							(mph)	
										-				• .	
												,		,	
	E230	12/05/89		1208				FALLING		89-2398	PC 45%		18.0	6	340
	E232	07/11/89		1400				FALLING	NO	89-0608	PC 60%		31.0	7	220
	E232	07/11/89		1400		<i></i>		FALLING	NO ***	89-0609	PC 60%		31.0	7	220
	E232	08/08/89		1649				RISING	NO NO	89-1722 89-1723	PC 30%		30.0	9	240
	E232 E232	08/08/89 09/12/89		1649 1238				RISING RISING	NO NO	89-1723	PC 30% PC 50%		30.0 33.0	9 6 a	240
	E232	09/12/89		1238				RISING	NO NO	89-1895	PC 50%		33.0	6-8 6-8	90 90
	E232	10/31/89		1200				RISING	NO NO	89-2056	PC 80%		25.0 26.0	CALM	
	E232	10/31/89		1200				RISING	NO	89-2057	PC 80%		26.0	CALM	
	E234	08/08/89		1716				RISING	NO	89-1724	PC 40%		29.5°	9	270
		08/08/89		1716				RISING	NO NO	89-1725	PC 40%		29.5	ģ	270
		09/12/89		1301				RISING	NO	89-1896	PC 70%			5-8	60
		09/12/89		1301				RISING	NO NO	89-1897	PC 70%			5-8	60
		01/17/89		1240				RISING	70	89-0054		;	23.0	5	NV
		08/24/89		0908		,-		RISING	NO	89-1754	PC		29.0	6	90
		08/24/89		0908				RISING	NO	89-1755	PC		29.0	6	90
	E238	08/24/89	0917	0927				RISING	NO	89-1844	PC 25%		29.0	6.	90
	E238	08/24/89	0917	0927	6.94		2.00	RISING	NO	89-1845	PC 25%		29.0.	6.	90
	E238	10/31/89	1205	1214	7.26		1.40	RISING	NO	89-2058	PC 80%	. :	25.0	CALM	
	E238	10/31/89	1205	1214	7.27		1.40	RISING	ЮК	89-2059	PC 30%		25.0	CALN	
	E240	01/17/89	1220	1225	7.70		1.60	RISING	NO	89-0053	CL		24.0	CALM	
	E240	02/07/89		1317				RISING	МО	89-0098	PC 15%		28.0	5-7	220
		02/07/89		1317				RISING	NO	89-0099	PC 15%		28.0	5-7	220
	E240	02/28/89		1311				RISING	МО	89-0229	PC 75%		25.0	8-10	190
		02/28/89		1311				RISING	NO	89-0230	PC 75%		25.0	8-10	190
		03/14/89		1312				RISING	NO	89-0297	CL		28.0	9-15	.180
	E240	03/14/89		1312.				RISING	ΝO	89-0298	CL		28.0	9-15	- 180
	E240	04/11/89		1336				RISING	NO.	89-0333	PC 75%		30.0	8-10	260
		04/11/89		1336				RISING	NO .	89-0334	PC 75%		30.0	8-10	260
		05/02/89		1200				RISING	<i>N</i> 0 -	89-0369	PC 50%		28.0	5-7	340
		05/02/89		1200				RISING	NO .	89-0370	PC 50%		28.0	5-7	340
	E240	05/31/89		1202				RISING	NO NO	89-0492	PC 30%		30.0	10	140
		05/31/89						RISING	NO NO	89-0493			30.0	10	140
		06/27/89 06/27/89		1045 1045				RISING RISING	NO NO	89-0570 89-0571	PC 30%		31.0	CALN	
		07/11/89		1325				FALLING	NO NO	89-0606	OC 70%		31.0 31.0	CALM 5	160
		07/11/89		1325				FALLING	NO.	89-0607	OC 70%		31.0	5	160
		08/08/89		1536				RISING	NO NO	89-1718			32.5.		300
	E240	08/08/89		1536				RISING	NO .	89-1719	PC 40%		32.5	7-9	300
		08/24/89						RISING	NO NO	89-1846	PC 15%		29.0	, ,	120
		08/24/89						RISING	NO ON		PC 15%		29.0	6	120
		09/12/89						RISING	NO NO	89-1898	PC 85%		35.0	5-7	60
		09/12/89						RISING			PC 85%		35.0	5-7	60
	E240	10/31/89		1256				aising	NO	89-2060	PC 90%		27.0	5-7	300
		10/31/89		1256		·		RISING	NO		PC 90%		27.0	5-7	300
	E240	11/20/89	1253	1304				FALLING	МО	89-2362			28.0	CALM	
	E240	11/20/89	1253	1304	7.73		1.60	FALLING	NO	89-2363	PC 25%	,	28.0	CALM	

Station	Date	Start Time		pH Std.			Tide	Stratified	Cont. Number	Weather general	Air Temp	Wi	nd
•					(ft.)			٠		conditions	Ċ.	Speed (mph)	Direction
E240	12/05/89		1230				FALLING	NO	89-2399		19.0	4-6	20
E240	12/05/89		1230				FALLING	NO	89-2400	PC 50%	19.0	4-6	20
E250	01/17/89		1312				RISING	NO	89-0055		27.0	8-9	NU
E250	02/07/89		1341				RISING	NO	89-0100		29.0	6-8	220
E250	02/07/89						RISING	NO	89-0101		29.0	6-8	220
E250	02/28/89		1337				RISING	NO	39-0231		26.0	6-9	200
E250	02/28/89		1337			-	RISING	NO	89-0232		26.0	6-9	200
E250	03/14/89		1351				RISING	NO	89-0299	CL	28.0	9-12	180
E250	03/14/89		1351				RISING	NO	89-0299	CL	28.0	9-12	180
E250	04/11/89		1408				RISING	NO NO	89-0335		30.0	2	220
E250	04/11/89		1408				RISING	NO NO	89-0336 89-0371		30.0	. 2	220
E250	05/02/89		1229				RISING	NO NO	89-0372		27.0	9-12	340
E250 E250	05/02/89 05/31/89		1229				RISING	NO	89-0494		27.0	9-12	340
E250	05/31/89						RISING RISING	NO No	89-0495		31.5 31.5	10 10	120 120
E250	06/27/89						RISING	NO NO	89-0572		33.0	CALM	120
E250	06/27/89		1106				RISING	NO NO	89-0573		33.0	CALM	
E250	07/11/89		1422				FALLING	NO	89-0610		32.0	6	280
E250	07/11/89		1422				FALLING	NO NO	89-0611		32.0	- 6	280
E250	08/08/89		1556				RISING	NO NO	89-1720	PC 40%	30.0	8-9	300
E250	08/08/89		1556				RISING	NO		PC 40%	30.0	8-9	300
E250	08/24/89		1001				RISING	NO	89-1849		29.0	6	135
E250	08/24/89			6.81		2.10	RISING	NO	89-1849		29.0	6	135
E250	09/12/89	1343	1356	6.93		2.30	RISING	NO	89-1900	PC 90%	34.0	7-9	60
E250	09/12/89	1343	1356	6.96		2.30	RISING	NO	89-1901	PC 90%	34.0	7-9	60
E250	10/31/89	1304	1315	7.03		1.50	RISING	NO	89-2062	PC 90%	27.0	7	280
E250	10/31/89						RISING	NO	89-2063	PC 90%	27.0	7.	_ 280
E250	11/20/89		1324				FALLING	NO	89-2364			3	45
	11/20/89		1324				FALLING	NO	89-2365			3	45
E250	12/05/89		1249				FALLING	NO	89-2401		20.0	5	340
E250	12/05/89						FALLING	NO NO	89-2402		20.0	5	340
E255	07/11/89		1641				FALLING	NO Mo	89-0618		33.0	4-5	320
E255	07/11/89					2.20	FALLING	NO NO		PC 60%	33.0		320
E255	11/20/89		1347				FALLING	NO NO	89-2366		28.0	4	310
E255	11/20/89		1347				FALLING	NC-	89-2367		28.0	4	310
E255 E255 .	12/05/89						FALLING	NO NO	89-2403 89-2404	PC 60%	20.0	4-5 4-5	350
E250 .	12/05/89 01/17/89		1311 1405				FALLING RISING	NO NO	89-0056	CL CL	20.0	0-5	350
E260							RISING	NO ON	89-0106	PC 35%	27.0 25.5	5	NW 220
E260 ⁻	02/07/89 02/07/89		1627 1627				RISING	ИО МО		PC 35%	25.5	5	220 220
E260	02/01/09		1439				RISING	NO NO	89-0233		28.5	7-9	200
E260	02/28/89						RISING	NO		PC 50%	28.5	7-9	200
E260	03/14/89						RISING	NO		CL	27.0	9-12	200
E260	03/14/89		1409				RISING	NO	89-0302		27.0	9-12	200
E260	04/11/89						RISING	NO		PC 40%	31.0	9-12	280
E250	04/11/89						RISING	NO		PC 40%	31.0	9-12	280
E260	05/02/89						RISING	NO	89-0373	PC 60%	30.0	8	340

Station	Date	Start Time		Std.	Gage		Tide	Stratified	Cont. Number	•	Air Temp	Vi	
				units	(ft.)	- (m)				conditions	· C	Speed (mph)	Direction
						•							
E260	05/02/89	1255	1311	7.32		2.40	RISING	NO	89-0374	PC 60%	30.0	3	340
E260	05/31/89						RISING	NO:	89-0456	PC 50%	33.0	7	100
E260	05/31/89						RISING	NO	89-0497	PC 50%	33.0	7	100
E260	06/27/89	1209	1223	6.91		2.60	RISING	NO	89-0574	RAIN.	30.0	CALM	
	06/27/89		1223	7.00		2.60	RISING	NO	89-0575	RAIN	30.0	CALM	
	07/11/89	1530	1543	7.60		2.00	FALLING	NO	39-0612	RAIN	28.0	8-10	260
E260	07/11/89	1530	1543	7.62		2.00	FALLING	NO	89-0613	RAIN	28.0	8-10	260
E260	08/08/89	1745	1754	7.06		1.90	RISING	NO	39-1726	PC 30%	31.0	7	280
E260	08/08/89	1745	1754	7.05		1.90	RISING	NO	89-1727	PC 30% .	31.0	7	280
E260	08/24/89	1024	1036	6.73		2.50	SLACK-H	NO	89-1850	PC 20%	30.0	5-8	135
E260	08/24/89	1024	1036	6.77		2.50	SLACK-H	NO	89-1851	PC 20%	30.0	5-8	135
E260	09/12/89	1420	1431				SLACK	NO	89-1902	PC 80%	34.0	7	60
	09/12/89		1431				SLACK	NO	89-1903	PC 80%	34.0	7	60
	10/31/89		1347				RISING	NO	89-2064	PC 90%	27.0	9-10	270
E260	10/31/89		1347				RISING	NO	89-2065	PC 90%	27.0	9-10	270
	11/20/89		1419				FALLING	NO	89-2368	PC 10%	25.0	2	310
	11/20/89		1419				FALLING	NO	89-2369	PC 10%	25.0	2	310
	12/05/89		1329				FALLING	ИО	89-2405	PC 60%	19.0	7-9	300
	12/05/89				;		FALLING	NO .	89-2406	PC 60%	19.0.	7-9	300
	02/07/89		1650				RISING	NO	89-0108	PC 20%	24.0	4-5	200
	02/07/89		1650				RISING	NO	89-0109	PC 20%	24.0	4-5	200
E265	01/17/89		1531				RISING	NO	89-0059	CL	23.0	0-10	SW
	02/28/89		1650				RISING	NO.	89-0241	PC 10%		2-3	200
	02/28/89		1650				RISING	NO.	89-0242	PC 10%		2-3 7-9	200
	03/14/89 03/14/89		1535 1535				RISING RISING	NO NO	89-0309 89-0310	PC 15% PC 15%	28.0 28.0	7-9	180 180
	11/20/89	,	1531				FALLING	NO .	89-2374	CT CTOW	25.0	3	360
	11/20/89		1531				FALLING	NO No	89-2375	CL	25.0	-3	360
E265	12/05/89		1511				FALLING	NO ·	89-2411	CF .	20.0	6-8	340
E265	12/05/89		1511				FALLING	NO ·	89-2412	CL	20.0	5-8	340
	02/07/89		1708				RISING	NO	89-0110	PC 10%	24.0	CALM	
E268	02/07/89		1708				RISING -	NO	89-0111	PC 10%	24.0	CALM	
E270	01/17/89		1428				RISING	NO NO	89-0057	CL	23.5	0-10	SW
E270	02/07/89		1607				RISING	NO	89-0104	•	26.5	4-5	200
E270	02/07/89		1607	7.82			RISING	NO .	89-0105	PC 30%	26.5	4-5	200
	02/28/89		1530				RISING	NO	89-0235	PC 30%	25.0		220
	02/28/89						RISING	NO	89-0236	PC 30%	A.F. A	8-10	220
	03/14/89		1420				RISING	- NO	89-0303	CL	. 27.0	7-10	180
E270	03/14/89		1420	7.29		1.80	RISING	NO	89-0304	CL	27.0	7-10	180
	04/11/89		1548	7.44		2.25	RISING	NO	89-0339	PC 25% .	31.0	5-7	240
E270	04/11/89		1548				RISING	NO	89-0340	PC 25%	31.0	5-7	240
E270	05/02/89		1333				RISING	NO	89-0375	PC 30%	30.0	5	340
	05/02/89						RISING	NO	89-0376	PC 50%	30.0	5	340
	05/31/89		1343				RISING	NO	39-0498	PC 50%		3-4	100
	05/31/89		1343				RISING	NO	89-0499	•		3-4	100
E270	06/27/89		1243				RISING	NO	89-0576	00 -	29.0	7	240
E270	06/27/89	1230	1243.	6.94		2.80	RISING	NO	89-0577	OC .	29.0	. 7	240

Station	Date .	Start Time		рН Std.		Depth, Total	Tide	Stratified	Cont. Number	Weather general	Air Temp			
					(ft.)				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	conditions	C	Speed (mph)	Direction	
E270	07/11/89		1600				FALLING	NO	89-0614	RAIN	30.0	5-6	260	
E270	07/11/89		1600				FALLING	NO	89-0615	RAIN	30.0	5-6	260	
E270	08/08/89		1810				RISING	NO	89-1728	PC 40%	27.5	4	270	
E270	08/08/89		1810				RISING	NO NO	89-1729	PC 40%	27.5	CALM	270	
E270 E270	08/24/89 08/24/89		1058 1058				SLACK-H	NO No	89-1852 89-1853	PC 20% PC 20%	30.0	CALM Calm		
E270	09/12/89		1450				SLACK-H SLACK	NO NO	89-1904	PC 85%	34.0	4-6	60	
E270	09/12/89		1450				SLACK	NO NO	89-1905	PC 85%	34.0	4-6	60	
E270	10/31/89		1403				RISING	NO	89-2066	PC 40%	28.0	5-6	280	
E270 .	10/31/89		1403				RISING	NO NO	89-2067	PC 40%	28.0	5-6	280	
E270	11/20/89		1439				FALLING	NO	89-2370	PC 10%		CALM		
E270	11/20/89		1439				FALLING	NO	89-2371	PC 10%		CALM		
E270	12/05/89		1413				FALLING	NO	89-2407	PC 20%	20.0	6-8	0	
E270	12/05/89		1413				FALLING	NO	39-2408	PC 20%	20.0	6-8	Ō	
E274	04/11/89		1737	6.99		2.70	RISING	NO	89-0345	PC 30%	30.0	7-10	260	
E274	04/11/89	1716	1737	7.14		2.70	RISING	NO	89-0346	PC 30%	30.0	7-10	260	
E275	02/28/89		1628	7.94		1.60	RISING	NO	89-0239	PC 10%		5-6	200	
E275	02/28/89		1628	7.93		1.60	RISING	NO	89-0240	PC 10%		5-6	200	
E275	03/14/89		1515				RISING	NO	89-0307	CL	27.0	9-12	180	
E275	03/14/89		1515				RISING	NO	89-0308	CL	27.0	9-12	180	
E275	05/02/89		1549				RISING	NO	89-0381	PC 20%	29.0	CALM		
E275	05/02/89		1549				RISING	NO	89-0382	PC 20%	29.0	CALM		
E276	04/11/89		1657				RISING	NO	89-0343	PC 20%	31.0	4-6	250	
E276	04/11/89		1657				RISING	NO	89-0344	PC 20%	31.0	4-6	250	
E280	01/17/89		1458				RISING	. NO	89-0058	CL	22.0	0-10	SW	
E280 E280	02/07/89		1537 1537				RISING	NO	89-0102 89-0103	PC 15% PC 15%	29.0 29.0	4-5.	180	
E280	02/07/89 02/28/89		1600				RISING RISING	NO NO	89-0237		27.0	4-5 4-5	180 180	
E280	02/28/89		1600				RISING	NO	89-0238	PC 20%	27.0	4-5	180	
E280	03/14/89		1445				RISING	NO	89-0305			7-8	180	
E280	03/14/89		1445				RISING	NO	89-0306			7-8	180	
E280	04/11/89		1630				RISING	NO	89-0341		30.0	5-7	260	
E280	04/11/89		1630				RISING	NO		PC 25%	30.0	5-7	260	
E280	05/02/89		1403				RISING	NO	89-0377	PC 30%	31.0	7-9	340	
E280	05/02/89		1403				RISING	NO	89-0378	PC 30%	31.0	7-9	340	
E280	05/31/89	1355	1410	7.54		4.40	RISING	NO	89-0500	PC 75%	33.0	5-9	120	
E280	05/31/89	1355	1410				RISING	NO		PC 75%	33.0	5-9	120	
E280	06/27/89		1308				RISING	NO	89-0578	0C				
E280	06/27/89		1308				RISING	NO	89-0579	OC				
E280	07/11/89		1619				FALLING	. 10	89-0616	PC 80%	32.0	7-9	320	
E280	07/11/89		1619				FALLING	NO	89-0617	PC 80%	32.0	7-9	320	
E280	08/08/89						RISING	NO	89-1730	PC 25%	27.0	3-5	300	
E280	08/08/89		1832		-		RISING	NO NO	89-1731	PC 25%	27.0	3-5	300	
E280	08/24/89		1128				SLACK-H	NO		PC 30%	32.0	7	135	
E280	08/24/89		1128				SLACK-H	NO NO	89-1855	PC 30% PC 75%	32.0	7 .		
E280	09/12/89						FALLING	NO NO	89-1906		35.0	3	50 60	
E280	09/12/89	1437	1310	0.02		3.30	FALLING	NO	89-1907	FU 13%	35.0	3	60	

Station		Date	Start				Depth,	Tide	Stratified		Weather	Air	Ψi	nd
	*-		lime			(ft.)	Total (m)			Number .	general conditions	Temp C	Speed (mph)	Direction
	E280	10/31/89	1415	1427	6.95		2.50	RISING	NO	89-2068	PC 20%	29.0	8	280
	E280	10/31/89	1415	1427	6.92		2.50	RISING	NO	89-2069	PC 20%	29.0	8	280
	E280	11/20/89	1450	1507	7.52		3.50	FALLING	NO	89-2372	PC 5%	25.0	5	360
	E280	11/20/89	1450	1507	7.52		3.50	FALLING	NO	89-2373	PC 5%	25.0	5	360
	E280	12/05/89	1421	1442	7.36		3.60	FALLING	NO	89-2409	CL	20.0	2-4	0
	E280	12/05/89	1421	1442	7.36		3.60	FALLING	NO.	89-2410	CL	20.0	2-4	0
	E290	05/02/89	1508	1523	7.87		2.20	RISING	NO	89-0380	PC 25%	30.0	. 5	340
	E290	05/31/89	1421	1434	7.41		2.40	RISING	ИО .	89-0502		33.0	CALM	
	E290	05/31/89	1421	1434	7.46		2.40	RISING	NO	89-0503		33.0	CALM	-:-
	E290	06/27/89	1400	1413	5.80		2.50	SLACK-H	NO	89-0580	00	30.0	CALM	
	E290	0.6/27/89	1400	1413	6.88		2.50	SLACK-H	NO	89-0581	00	30.0	CALN	
	E290	05/02/89	1508	1523	7.86		2.20	RISING	NO	89-0379	PC 25%	30.0	5	340
	E300	05/31/89	1442		7.54		2.20	RISING	NO .	89-0504	PC 80%	34.0	2-3	100
	E300	05/31/89	1442		7.52		2.20	RISING	NO	89-0505	PC 80%	34.0.	2-3	100
	E300	06/27/89	1423	1433	6.90		2.40	SLACK-H	NO	89-0582	PC 40%	32.0	CALM	
	E300	06/27/89	1423	1433	6.98		2.40	SLACK-H	ИО	89-0583	PC 40%	32.0	CALM	

Myakka River Basin Project Estuary Station Profile Dissolved Oxygen In Situ Results Through December, 1989

```
Dissolved Oxygen
Station
         Date
                           \{mg/1\}
                 at 0.5 meter depths from the surface
                  0.5 1.0 1.5
                                    2.0
                                          2.5 3.0 3.5
E210
        01/17/89
                  9.00 9.00 8.80 8.40
                              5.69 6.52
E210
                  6.80
                        6.70
        02/07/89
                              8.72 8.55
E210
        02/28/89
                  8.61
                        8.70
                                         8.60
                                         7.50
E210
                  7.40 7.70
                             7.76 7.70
        03/14/89
                  8.55 8.38
                             7.65
                                   7.10
E210
        04/11/89
                             5.55 5.38 5.13
E210
        05/02/89
                  5.53 5.53
                             6.38 6.40 6.35
E210
        05/31/89
                  6.45 6.48
E210
        06/27/89
                  6.28
                        6.50
                              5.70
                                   5.70 5.65
E210
        07/11/89
                  7.13
                        7.13
                              7.00
                                   6.88
E210
        08/08/89
                  6.78
                       6.53
                              3.73
                                   2.58
        08/24/89
                  5.51 5.50
                              5.55
                                   5.73
E210
                                          5.03
E210
        09/12/89
                  6.13
                        6.05
                              5.98 -5.20
E210
        10/31/89
                  5.35
                        5.18
                              4.99
                                   4.95
                  7.35
                        7.43
                              7.53
                                   7.53
E210
        11/20/89
                        8.40
                              8.28
                                    80.8
E210
        12/05/89
                  8.60
                              3.33
                                   3.20
E215
        09/12/89
                  6.90 3.70
                             8.80 8.80 8.80
                  9.20 9.20
E220
        01/17/89
                             6.65 6.60 6.60
E220
        02/07/89
                  6.70 6.75
        02/28/89
                             9.10 9.08 9.02
E220
                  9.12 9.15
                  7.03 7.10
E220
        03/14/89
                              6.85 6.80 6.60
       04/11/89
E220
                       6.69
                              6.54 6.40
                  6.93
E220
        05/02/89
                  5.80 5.78
                              5.78 5.73
                  6.35 6.30
E220
        05/31/89
                              6.20 6.20 6.20
        06/27/89
                  4.98 4.94
                              4.93 4.88
                                         4.96
E220
E220
        07/11/89
                  5.66 5.60
E220
        08/08/89
                  5.34 5.20
                              4.31
                              5.67 5.60
E220
        08/24/89
                  6.15
                        6.05
                        6.35
                              5.40
                                    4.26 3.70
E220
        09/12/89
                  6.47
        10/31/89
                  7.60
                        6.73
                              6.25
E220
                  7.93 7.85 7.80 7.75
E220
        11/20/89
                  8.92 8.75 8.70
E220
        12/05/89
                              8.80
E230
        01/17/89
                  8.90 8.80
E230
        02/07/89
                  6.30 6.28
                  10.1 9.90 10.2
E230
        02/28/89
        03/14/89
                  6.65 6.60
                              6.55
E230
        04/11/89
E230
                  7.55 7.55
                              7.60
E230
        05/02/89
                  6.38 - 6.38
                             6.40
E230
        05/31/89
                  6.73 6.63
                              6.60
E230
        06/27/89
                  4.98 4.85 4.70
E230
        07/11/89
                  6.13 5.80 5.05
        08/08/89
                  4.25 1.50
                              1.20
E230
                              5.53
        08/24/89
                   5.38
                       5.56
E230
E230
        09/12/89
                   5.25 5.20
                              5.38
E230
        10/31/89
                   6.85 6.09
E230
                   8.28 7.90
        11/20/89
```

Myakka River Basin Project Estuary Station Profile Dissolved Oxygen In Situ Results Through December, 1989

```
Station Date Dissolved Oxygen (mg/l)
            [mg/1)
at 0.5 meter depths from the surface
0.5 1.0 1.5 2.0 2.5 3.0 3.5
 E230 12/05/89 9.60 9.35
E232 07/11/89 6.48
E232 08/08/89 4.57
 E232
        09/12/89 4.88 4.73 4.67
 E232
        10/31/89 6.44 6.40
08/08/99 6.44 6.40
E232
       08/08/89 4.34 3.93 0.55
09/12/89 4.45 4.50 4.53
01/17/89 8.90 8.80
 E234
 E234
E235
        08/24/89 5.49 5.55 5.61
 E235
        08/24/89 5.13 5.15 5.10
 E238
        10/31/89 6.75 6.70
 E238
       01/17/89 8.10 7.90 7.80
02/07/89 6.20 6.20 6.00
02/28/89 8.85 8.80 8.65
03/14/89 6.30 6.25 6.35
 E240
 E240
 E240
 E240
        04/11/89 7.13 7.00 6.87
 E240
 E240
        05/02/89 5.80 5.80 5.78
 E240
        05/31/89 6.38 6.35 6.23 6.20
        06/27/89 5.53 5.53 5.55 5.38
07/11/89 5.80 5.78 5.70
08/08/89 4.00 3.97 3.94
 E240
 E240
 E240
E240
       08/24/89 5.05 4.90 4.89
 E240
        09/12/89 4.26 4.20 4.24
        10/31/89 7.13 7.14
 E240
        11/20/89 7.70 7.56 7.36
12/05/89 9.60 9.38
01/17/89 8.20 8.00 8.00
E240
 E240
 E250
        02/07/89 5.60 6.78
 E250
        02/28/89 8.80 8.90 8.80
E250
        03/14/89 6.88 6.83 7.08 7.05
        04/11/89 6.93 6.87 6.85
05/02/89 5.96 6.05 5.93
 E250
E250
        05/31/89 6.40 6.20 6.20 6.20
 E250
        06/27/89 5.60 5.47 5.43 5.31
 E250
        07/11/89 5.50 5.45 5.38
08/08/89 3.80 3.75 3.69
E250
 E250
        08/24/89 4.65-4.68 4.61 4.59
        10/31/89 6.90 6.80
11/20/89 8.53 7.98 7.90
12/05/89 9.72 9.70
07/11/89 4.00 3.95 3.98 3.90
 E250
E250
 E250
 E255
        11/20/89 8.25 8.08 7.35 7.70
E255
        12/05/89 9.50 9.45 9.40
 E255
        01/17/89 9.30 8.50 8.50
E260
 E260 02/07/89 6.80 6.50 6.60
```

Nyakka River Basin Project Estuary Station Profile Dissolved Oxygen In Situ Results Through December, 1989

```
.Dissolved Oxygen
Station Date
                           (mg/1)
                 at 0.5 meter depths from the surface
                                    2.0 2.5 3.0 3.5
                  0.5 1.0 1.5
E260
        02/28/89
                  8.70 8.60 8.70 8.35
E260
        03/14/89
                  7.23
                        6.80
                              5.58
                                   7.00
E260
        04/11/89
                  7.47
                       7.34
                              6.90
        05/02/89
E260
                  6.15
                       5.83
                              5.68
                                   5.65
        05/31/89
                  6.78
                        6.76
                              6.75 6.78
E260
                                         6.70
E260
        06/27/89
                  5.33 5.33 5.23 5.16
E260
       07/11/89
                        3,98
                  3.90
                              3,90
E260
       08/08/89
                  3.68
                        3.64
                              3.63
E260
        08/24/89
                  4.35
                       4.33
                              4.32
                                   4.29
E260
       09/12/89
                  3.98
                       3.76
                             3.73
        10/31/89
                  6.75
                       6.76
                              6.71
E260
E260
        11/20/89
                  8.58
                       8,55
                              8,50
E260
                        9,32
        12/05/89
                  9.32
                              9.20
E264
       02/07/89
                  7.10
                        7.00 7.00
E265
       01/17/89
                  9.80 9.70
E265
        02/28/89
                  8.90 8.95
                              9.00
E265
        03/14/89
                  6.80 6.78
                             5.85
E265
        11/20/89
                  8.40 8.33
                              8.30
        12/05/89
E265
                  9.75
                       9.65
E268
        02/07/89
                  7.40
                       7.30
                              7.25
                                   7.30 7.25 7.20 7.20
E270
        01/17/89
                  9.10 9.10
                              9.00
E270
        02/07/89
                  7.00
                        6.90
                              6.92 6.90
E270
        02/28/89
                  8.85
                        8.90
                              8,90 8,75 8,50
E270
        03/14/89
                  6.85
                        5.70
                              5.85
E270
        04/11/89
                  7.12
                        6.98
                              5.71
                                    6.65
E270
        05/02/89
                  7.05
                        5.93
                              6.93
                                    6.93
E270
       05/31/89
                  7.08
                        7.08
                              5.95
                                   6.95
                                          6.85
E270
       06/27/89
                  5.05
                       5.05
                              5.03
                                   4.85
                                          4.80
E270
        07/11/89
                  3.35 3.33
                             3.28
E270
       08/08/89
                  3.58 3.54
                              3,50
E270
       08/24/89
                                   3.99
                  4.07 4.05
                              4.01
        09/12/89
E270
                  3.98
                        3.78
                              3.66
                                    3.50
E270
        10/31/89
                  5.43
                       6.40
                              6.37
E270
        11/20/89
                  7.85 7.85
                              7.84 7.70
E270
        12/05/89
                  8.80 3.80
                              8.72 8.62
E274
                                   7,40
        04/11/89
                  7:86 7.47
                              7.50
E275
        02/28/89
                  9.05-9.00
                              8.95
E275
        03/14/89
                  7.50 7.45
                              7.40
                                   7,40 7,45 7,35
        05/02/89
                  7.95
                        7.90
                                    7,65
E275
                              7.75
E276
        04/11/39
                  7.72
                        7.70
                                    7.30
                                         7.19
                              7.31
E280
        01/17/89
                  9.30
                       9.50
                              9.30
                                    9.40
                                         9.30 9.10
                                    7.00
                                         7.05 7.00
E280
        02/07/89
                  7.40 7.20
                              7.10
                                          7.95 7.95
E280
        02/28/89
                  8.30
                       8.20
                              8.10 7.90
        03/14/89
                  8.55
                       9.05
                                   8.80
                                         8.88 8.68
                                                     8.65
E280
                              8.88
                                         6.75 6.61
        04/11/89
                  7.31 6.95 6.71 6.80
E280
```

Nyakka River Basin Project Estuary Station Profile Dissolved Oxygen In Situ Results Through December, 1989

Station	Date	. D		ed 0xy; g/1}	gen			
		at 0.5		the s	he surface			
		0.5		1.5		2.5		3.5
E280	05/02/89	8.08	7.95	7.63	7.43	7.13	7.13	
E280	05/31/89				7.45		7.40	7.40
E280	06/27/89	5.58	5,50	5:25	5.14	5.17		
E280	07/11/89	2.88	2.88	2.80	2.80			
E280	08/08/89			3.39	3.35	3.31		
E280	08/24/89	3,88			3.83	3.83	3.79	3.72
E280	09/12/89			3.61	3.53	3.49	3.49	
E280	10/31/89	6.33	6.33	6.33	6.30	6.30		
E280	11/20/89	6.70	6.68	6.65	6.70	6.73	6.58	
E280	12/05/89		7.88	7.88	7.82	7.86	7.80	
E290	05/02/89	8.53	8.42	8.38	8.35			
E290	05/31/89		6.48		6.50			
E290	06/27/89		5.85	5.55				
E300	05/31/89		6.55	6.50	6.50			
E300	06/27/89	6.78	6.28	5.83				
	٠.,	•						,

```
Temperature,
Station Date
                  degrees C
               at 0.5 meter depths from the surface
               0.5 1.0 1.5 2.0
                                        2.5 3.0
E210
       01/17/89
                 22.0 22.0 22.0 22.0
E210
       02/07/89
                 24.0 24.0 24.0 24.0
                 19.0 18.0 18.0 17.9 17.9
E210
       02/28/89
E210
       03/14/89
                 20.5 20.0 19.8 19.7 19.5
       04/11/89
E210
                 26.0 25.8 25.5 25.5
E210
       05/02/89
                 27.0 26.9 26.5 26.5 26.5
       05/31/89
                            29.5 29.5 29.5
E210
                 29.3 29.5
       06/27/89
                 30.1 30.2
E210
                            31.0 31.0 31.0
       07/11/89
                 32.0 32.0
                            32.0 32.0 32.0
E210
       08/08/89
                 32.0 31.8
                            31.0 30.5
E210
       08/24/89
                 29.5 29.5
                            29.5 29.5 30.0
E210
E210
       09/12/89
                 30.0 30.0
                            30.0 30.0 30.0
       10/31/89
                 23.8 23.5 23.5 23.5
E210
       11/20/89
                 20.0 20.0
                            20.0 20.0
E210
E210
       12/05/89
                 17.0 17.0 17.0 17.0
E215
       09/12/89
                 29.5 30.0 30.0 30.1
       01/17/89
                 23.0 23.0 23.0 23.0 23.0
E220
E220
       02/07/89
                 24.5 24.5 24.5 24.8 24.8
E220
       02/28/89
                 18.8 18.5 18.5 18.0 18.0 18.0
       03/14/89
                 21.0 20.5
                            20.5 20.3 20.4
E220
E220
       04/11/89
                 26.0 26.0 26.0 26.1
                 26.5 26.5 26.5 26.5
E220
       05/02/89
E220
       05/31/89
                 29.9 29.9 29.9 29.9 29.9
       06/27/89
E220
                 30.1 30.1
                            30.2 30.2 30.5
                 33.0 32.0
E220
       07/11/89
E220
       08/08/89
                 32.5 32.5 33.0
E220
       08/24/89
                 30.0 30.0 30.0 30.0
E220
       09/12/89
                 30.0 30.0 30.0 30.0 30.0
E220
       10/31/89
                 24.0 24.0 24.0
E220
       11/20/89
                 20.3 20.5 20.5 20.5
E220
       12/05/89
                17.0 17.0 17.0
E230
       01/17/89
                 23.0 24.0 24.0
E230
       02/07/89
                 26.0 25.8
E230
       02/28/89
                 18.8 18.5 18.0
E230
       03/14/89
                 21.5 21.5 21.5 21.5
E230
       04/11/89
                 27.0 26.9 27.0
E230
       05/02/89
                 27.0 - 27.0 27.0
E230
       05/31/89
                 28.5 28.5 28.5
E230
       06/27/89
                 32.0 32.0 32.0
       07/11/89
                 32.0 32.0 32.0
E230
E230
       08/08/89
                 33.0 32.0 32.0
8230
       08/24/89
                 31.0 31.0 31.0
                 30.8 30.8 30.5
E230
       09/12/89
E230
       10/31/89
                 24.0 24.0
E230
       11/20/89
                 20.5 20.2
```

```
Temperature,
degrees C
Station Date
               at 0.5 meter depths from the surface
            0.5 1.0 1.5 2.0 2.5 3.0
       12/05/89 16.5 16.2
E230
E232
      07/11/89
                32.0
       08/08/89
                32.0
E232
       09/12/89
                30.0 -30.1 30.1
E232
E232
       10/31/89
                24.0 24.0
                33.0 33.0 32.0
E234
       08/03/89
E234
       09/12/89
                30.1 30.0 30.0
E235
       01/17/89
                24.0 24.0
E235
       08/24/89
                30.5 30.5 30.5
       08/24/89
                30.5 30.0 30.0
E238
E238
                24.8 24.8
       10/31/89
       01/17/89
                23.0 23.0 23.0
E240
E240
       02/07/89
                26.0 26.0 26.0
       02/28/89
                19.0 18.0 18.0
E240
                21.5 21.5 21.5
E240
       03/14/89
E240
       04/11/89
                26.6 26.7 26.6
                27.8 27.8 27.5
E240
       05/02/89
       05/31/39
                28.5 28.5 28.5 28.5
E240
E240
       06/27/89
                31.5 31.5 31.8 31.8
E240
      07/11/89
                32.0 32.0 32.0
      08/08/89
                33.0 32.5 32.5
E240
E240
       08/24/89
                 31.0 31.0 31.0
E240
       09/12/89
                 30.0 30.0 30.0
E240
       10/31/89
                24.8 24.8
                21.5 21.0 21.0
     - 11/20/89
E240
      12/05/89
                17.0 17.0
E240
E250
       01/17/89
                24.0 24.0 24.0
E250
       02/07/89
                 26.0 26.0
E250
       02/28/89
                 20.0 19.0 18.2
E250
       03/14/89
                 22.0 22.0 22.0 21.9
E250
       04/11/89
                 27.3 27.0 27.0
E250
       05/02/89
                27.5 27.5 27.5
E250
       05/31/89
                 28.5 28.5 28.5 28.5
E250
       06/27/89
                32.0 32.0 32.0 32.0
                 32.0 32.0 32.0
E250
       07/11/89
E250
       08/08/89
                32.0 32.0 32.0
E250
       08/24/89
                31.5-31.5 31.5 31.5
E250
       10/31/89
                25.0 24.8
       11/20/89
                22.5 21.9 21.8
E250
E250
       12/05/89
                17.8 17.5
                32.0 32.0 32.0 32.0
E255
       07/11/89.
       11/20/89
                 22.5 22.0 22.0 22.0
E255
       12/05/89
                18.0 18.0 18.0
E250
       01/17/89
                 24.5 24.0 24.0
E250
       02/07/89 26.0 26.0 26.0
```

```
Temperature,
Station Date
                   degrees C
           at 0.5 meter depths from the surface
               0.5 1.0 1.5 2.0 2.5 3.0
                                                    3.5
E260
       02/28/89
                 20.5 20.0 19.5 19.0
E260
       03/14/89
                 22.2 22.2 22.0 22.0
       04/11/89
E260
                 28.2 27.3 27.1
       05/02/89
                 28.0 28.0 28.0 28.0
E260
       05/31/89
                            29.0 29.0
E260
                 29.0 29.0
                 31.7 31.5 31.5 31.5
       06/27/89
E260
       07/11/89
                 32.0 32.0 32.0
E260
       08/08/89
                 32.0 32.0
                            32.0
E260
E260
       08/24/89
                 31.0 31.0 31.0 31.0
       09/12/89
                 30.1 30.0 29.9 29.9
E260
                 25.0 25.0
E260
       10/31/89
                            25.0
E260
       11/20/89
                 22.5 22.5 22.5
E260
       12/05/89
                 18.0 18.0 18.0
                 26.5 26.5 26.5
E264
       02/07/89
E265
       01/17/89
                 24.0 24.5
                 20.0 20.0 20.0
E265
       02/28/89
E265
       03/14/89
                 23.0 23.0 22.9
E265
       11/20/89
                 22.5 22.5 22.5
E265
       12/05/89
                 18.0 18.0
                 26.5 26.5 26.5 26.5 26.5 26.5 26.5
E268
       02/07/89
E270
                 24.0 24.2 24.2
       01/17/89
       02/07/89
E270
                 26.0 26.0 26.0 26.0
                 19.5 19.2 19.5 18.5 18.5
E270
       02/28/89
E270
       03/14/89
                 22.5 22.5
                            22.5
E270
       04/11/89
                 27.8 27.6 27.6 27.6
E270
       05/02/89
                 29.0 29.0 29.0 29.0
                 30.0 29.8 29.5 29.2 29.2
E270
       05/31/89
E270
       06/27/89
                 31.0 31.0 31.0 31.0 31.0
E270
       07/11/89
                 32.0 32.0 32.0 32.0
E270
       08/08/89
                 31.5 31.5 31.5
E270
       08/24/89
                 30.0 30.0 30.0 30.0
E270
       09/12/89
                 31.0 30.0 29.7 29.0 29.0
E270
       10/31/89
                 25.0 25.0 25.0
                 22.5 22.5 22.2 22.2
E270
       11/20/89
E270
       12/05/89
                 17.5 17.5 17.5 17.5
E274
       04/11/89
                 28.2 28.0 28.0 28.0
                 20.0 - 19.5
E275
       02/28/89
                            19.0
                 22.5 22.5 22.5 22.5 22.5 22.5
E275
       03/14/89
E275
                 29.0 29.0 29.0 29.0
       05/02/89
                 28.1 27.7 27.3 27.3 27.2
E276
       04/11/89
                 23.5 23.0 23.0 22.8 22.8 22.5
       01/17/89
E280
                 25.5 25.5 25.5 24.5 24.5 24.5
E280
       02/07/89
       02/28/89
                                        17.8 18.0
E280
                19.0 18.5 18.0 18.0
                 21.9 21.5 21.0 21.0 21.0 21.0 21.0
E280
       03/14/89
                 27.6 27.0 26.8 26.4 26.4 26.4 25.9
E280
       04/11/89
```

Station	Date	To	e <mark>mpera</mark> degre					
		at 0.5		depths	from	the so	rface	
•		0.5	1.0	1.5	2.0	2.5	3.0	3.5
E280	05/02/89	29.0	29.0	28.8	28.5	28.0	28.0	
£280	05/31/89	30.0	30.0	30.0	29.5	29.5	29.5	30.0
E280	06/27/89	30.0	30.0	30.0	30.0	30.0		
E280	07/11/89	32.0	32.0	32.0	32.0			
E280	08/08/89	31.0		31.0	31.0	31.0		
E280	08/24/89	31.0	31.0	30.0	30.0	30.0	30.0	30.0
E280	09/12/89	30.3	30.1		29.8	29.2	29.2	
E280	10/31/89	24.7	24.5	24.5	24.5	24.5		
E280	11/20/89	21.7	21.5	21.5	21.5	21.5	21.5	
E280	12/05/89	17.6	17.6	17.5	17.8	17.9	17.9	
E290	05/02/89	28.5	28.5	28.5	28.5			
E290	05/31/89	30.0	30.0	30.0	30.0			
E290	06/27/89	31.0	31.0	31.0				
E300	05/31/89	29.5	29.5	29.5	29.5			
E300	06/27/89	31.0	31.0	31.0				

Myakka River Basin Project Estuary Station Profile Condutivity In Situ Results Through December, 1989

Station Date

Conductivity,

umhos/cm

at 0.5 meter depths from the surface 0.5 1.0 1.5 2.0 2.5 3.0 3.5

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01/17/89 38700 38700 39000 39200
E210
E210
        02/07/89 39000 39000 39000 39000
        02/28/89 34800 34200 34200 34300 34500
E210
E210
        03/14/89 33600 33600 33600 33650 32000
E210
        04/11/89 37500 38000 39900 40800
        05/02/89 44000 44000 44100 45000 45100
E210
        05/31/89 48000 48000 48000 48000 48000
E210
       06/27/89 43000 44750 47800 47900 47900
E210
        07/11/89 40800 40150 39950 39950 41000
E210
E210
        08/08/89 33050 35950 40450 43050
        08/24/89 31150 31150 31350 32100 33100
E210
        09/12/89 33900 33900 33900 34100 35600
E210
        10/31/89 33450 35050 35150 35900
E210
        11/20/89 33500 33500 33500 33800
E210
        12/05/89 33650 33850 33950 34000
E210
        09/12/89 24900 33000 33500 33700
E215
        01/17/89 32000 32000 32000 32000 32100
E220
        02/07/89 33000 33000 34000 34000 34000
E220 -
       02/28/89 31800 31900 31900 31900 31800 31900
E220
        03/14/89 34500 34500 34500 34500 34500
E220
        04/11/89 36000 35950 36050 37000
E220
E220
        05/02/89 38500 38500 38500 38500
        05/31/89 44100 44100 44100 44100 44100
E220
        06/27/89 39900 39900 39900 39900 39900
E220
        07/11/89 34950 34900
E220
        08/08/89 23850 23850 24200
        08/24/89 18250 18300 18900 19000
E220
        09/12/89 22100 22150 23900 25150 26500
E220
E220
        10/31/89 20400 22250 24100
        11/20/89 24550 25100 25750 26000
E220
        12/05/89 26150 27150 27500
E220
        01/17/39 28000 28100 28100
E230
        02/07/89 27800 27800
E230
E230
        02/28/89 28000 28000 28100
E230
        03/14/89 30900 30900 30900 30900
E230
        04/11/89 33500 33400 33350
E230
        05/02/89 34500 34650 34650
E230
        05/31/89 41500 41550 41500
E230
        06/27/89 37850 37850 37900
E230
        07/11/89 25300 26800 27500
        08/08/89 10100 24650 26250
E230
        08/24/89 16100 17850 17900
E230
       09/12/89 13850 14000 13900
E230
       10/31/89 16200 19800
E230
        11/20/89 20200 22100
```

Myakka River Basin Project Myakka River Basin Project
Estuary Station Profile
Condutivity In Situ Results
Through December, 1989

Station Date

Conductivity,
umhos/cm

at 0.5 meter depths from the surface 0.5 1.0 1.5 2.0 2.5 3.0 3.5

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E230 12/05/89 21200 22000

E232 07/11/89 18450

E232 08/08/89 6100

E232 09/12/89 9150 9100 9100

E232 10/31/89 10950 12200

E234 08/08/89 2780 6100 23000

E234 09/12/89 3375 3650 4305
E235
         01/17/89 24900 27000
E235
           08/24/89 11650 12150 12900
         08/24/89 8050 8900 8900
10/31/89 6100 6100
 E238
E238
E240
        02/07/89 18300 18500 18500

02/07/89 17200 17200 17200

02/28/89 21900 21900 22100

03/14/89 24100 24050 24100

04/11/89 26100 26100 26100

05/02/89 29000 29000 29100

05/31/89 36100 26050 26050 26050
          01/17/89 18500 18500 18500 .
 E240
 E240
 E240
 E240
 E240
         05/31/89 36100 36050 36000 36000
06/27/89 31900 31950 31900 31900
E240
E240
         .07/11/89 4825 4810 4805
 E240
         08/08/89 1395 1400 1405
E240
         08/24/89 4850 6400 6900
 E240
         09/12/89 2505 2550 2515
 E240
         10/31/89 3695 3835
 E240
         11/20/89 12550 13050 13200
E240
          12/05/89 15000 15100
 E240
         01/17/89 14500 14500 14500
 E250
         02/07/89 12800 13000
 E250
         02/28/89 17200 17300 17200
         03/14/89 19150 19100 19200 19200
         04/11/89 22200 22200 22200
05/02/89 25800 25850 25600
 E250
 E250
          05/31/89 34650 34500 34500 34500
  E250
          06/27/89 28350 28350 28350 28350
          07/11/89 815 810 810
08/08/89 422 419 417
           08/24/89 1800 1800 1795 1800
  E250
          08/24/89 1800 1800 1775 1000
10/31/89 1590 1820
11/20/89 9200 9900 9900
12/05/89 9200 10500
  E250
 E250
  E250
          07/11/89 540 550 550 550
  E255
          11/20/89 6000 6200 6950 7500
  E255
          12/05/89 6200 6200 6500
  E260
         01/17/89 6500 7000 7000
         02/07/89 9200 9200 9800
  E260
```

Myakka River Basin Project Estuary Station Profile Condutivity In Situ Results Through December, 1989

Station Date

Conductivity, umhos/cm

at 0.5 meter depths from the surface

0.5 1.0 1.5 2.0 2.5 3.0 3.5

```
E260
       02/28/89 13500 13500 13800 13900
       03/14/89 12900 13050 13100 13100
E260
E260
       04/11/89 17300 18000 18100
E260
       05/02/89 20650 20750 21150 21200
E260
       05/31/89 31800 31800 31800 31800 31800
       06/27/89 27200 27200 27200 27200
E260
       07/11/89
                 505
                       550
E260
                              580
                        299
                              300
E260
       08/08/89
                  290
                              920
       08/24/89
                  905
                        915
E260
       09/12/89
                              530
                                   515
E260
                  515
                        510
E260
        10/31/89
                              347
                        344
                  340
                             2990
E260
        11/20/89 2920
                       2970
E260
        12/05/89
                 3960
                       3960
                             4000
E264
       02/07/89
                4300
                       4300
E265
       01/17/89 4080 4110
       02/28/89 11500 11500 11500
E265
       03/14/89 8100
                      8150
                             8500
E265
E265
       11/20/89 . 950
                       965
                              980
E265
       12/05/89 1290
                       1290
E268
       02/07/89 2590
                       2600
                             2650
                                   2700
                                         2720 2810 2820
E270
        01/17/89 1040
                      1120 1150
E270
       02/07/89 1100
                       1100
                             1020 1010
E270
        02/28/89 8000
                       8000
                            8100 8100
E270
        03/14/89 5000
                      5100
                            5150
E270
        04/11/89 10500 11000 11050 11150
E270
        05/02/89 11900 11900 11900 12000
E270
       05/31/89 26700 27600 27800 27900 28000
E270
       06/27/89 26000 26000 26050 26100 26100
E270
       07/11/89
                 425
                       425
                             423 423
E270
       08/08/89
                 252
                       252
                              252
E270
       08/24/89
                       264
                              265
                                  268
                 264
E270
       09/12/89
                  221
                        220
                              216
                                    215 215
E270
        10/31/89
                 252
                       252
                              252
E270
        11/20/89
                 439
                        435
                              435
                                   435
E270
        12/05/89 5.35
                        565
                              565
                                   580
E274
        04/11/89 7600
                       8200
                             8150
                                   8100
        02/28/89
E275
                4350
                       4350
                             4400
E275
        03/14/89
                 2145
                       2250
                             2250
                                   2320
                                               2380
E275
        05/02/89
                 5210
                       5950
                             5950
                                   6100
                                   3710
                                        3570
E276
        04/11/89
                 3210
                       3280
                             3650
                        298
                              298
                                   298
                                         298
E280
        01/17/89
                  301
                                                298
                        285
                                   282
                                         285
                                                282
E280
        02/07/89
                  285
                              285
                        790
                              850
                                    990
                                         1080
                                               1080
E280
        02/28/89
                  710
E280
        03/14/89
                 418
                        415
                              415
                                    409
                                         410
                                                409
                950 1040
                             1090 1120 1120 1120 1115
E280
        04/11/89
```

Myakka River Basin Project Estuary Station Profile Condutivity In Situ Results Through December, 1989

Station Date

Conductivity, umhos/cm

at 0.5 meter depths from the surface 0.5 1.0 1.5 2.0 2.5 3.0 3.5

E280	05/02/89	1545	1605	1580	1625	1630	1635	
E280	05/31/89	16100	16200	16500	16600	16600	16500	16500
E280	06/27/89	20100	20350	20500	20500	20800		
E280	07/11/89	390	389	389	388			
E280	08/08/89	237	235	234	234	232		
E280	08/24/89	224	- 221	221	221	222	222	222
E280	09/12/89	191	191	190	189	189	189	
E280	10/31/89	231	231	231	231	232		
E280	11/20/89	289	287	288	288	287	286	
E280	12/05/89.	287	285	285	285	285	237	
E290	05/02/89	710	710	705	705			
E290	05/31/89	8900	8700	9050	9100			
E290	06/27/89	14050	14800	14800	•			
E300	05/31/89	3120	3135	3135	3180			
E300	06/27/89	8950	9000	9000				

Station Date

Salinity, o/oo

at 0.5 meter depths from the surface 0.5 1.0 1.5 2.0 2.5 3.0 3.5

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01/17/89 25.8 25.8 26.0 26.1
E210
E210
       02/07/89 25.0 25.0 24.9 24.9
       02/28/89 25.0 25.2 25.2 25.5 25.5
E210
E210
       03/14/89 25.2 25.3 25.6 25.7 26.5
E210
       04/11/89 24.1 24.5 24.9 25.2
E210
       05/02/89 27.6 27.5 27.8 28.8 28.9
E210
       05/31/89 27.9 27.9 27.9 27.9 27.9
       06/27/89 24.5 26.4 27.5 27.5 27.5
E210
E210
       07/11/89 22.5 22.2 22.0 22.0 23.4
        08/08/89 17.5 19.8 22.4 24.5
E210
        08/24/89 17.4 17.4 17.4 17.9 18.5
E210
E210
        09/12/89 19.9 19.9 20.0 20.1 21.6
        10/31/89 21.4 22.8 23.0 23.0
E210
        11/20/89 23.0 23.0 23.0 23.0
E210
       12/05/89 25.2 25.3 25.5 25.8
E210
E215
       09/12/89 13.6 18.5 18.9 18.9
        01/17/89 20.5 20.8 20.8 20.9 20.9
E220
E220
        02/07/89 20.8 20.9 21.5 21.2 21.2
E220
       02/28/89 22.5 22.8 22.9 23.1 23.1 23.1
       03/14/89 23.5 23.8 23.7 23.7 23.9
E220
       04/11/89 22.1 22.1 22.1 22.2
E220
E220
       05/02/89 23.3 23.2 23.2 23.2
E220
        05/31/89 26.1 26.1 26.1 26.1 26.1
E220
        06/27/89 23.0 23.0 23.1 23.0 23.0
E220
        07/11/89 19.1 19.2
E220
        08/08/89 12.8 12.9 13.0
       08/24/89 9.5 9.7 10.0 10.1
E220
        09/12/89 12.0 12.1 13.0 14.0 14.6
E220
        10/31/89 12.8 13.9 15.0
E220
        11/20/89 16.4 16.0 17.3 17.6
E220
       12/05/89 19.5 20.1 20.2
E220
       01/17/89 18.0 17.8 17.9
E230
E230
       02/07/89 16.5 16.8
E230
       02/28/89 20.0 20.0 20.1
E230
       03/14/89 20.5 20.5 20.5 20.4
E230
       04/11/89 20.1 20.1 20.0
E230
        05/02/89 20.9 20.9 20.9
E230
        05/31/89 24.9 24.9 24.9
E230
        06/27/89 20.3 20.3 20.4
E230
        07/11/89 13.6 14.5 14:9
E230
        08/08/89 5.2 12.9 13.8
E230
        08/24/89 8.8 9.2 9.2
E230
        09/12/89 7.2 7.4 7.4
E230
        10/31/89 9.8 12.0
E230
        11/20/89 13.7 14.8
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Myakka River Basin Project Estuary Site Profile Salinity In Situ Results Through December, 1989

Station Date
Salinity,
o/oo
at 0.5 meter depths from the surface
0.5 1.0 1.5 2.0 2.5 3.0 3.5 12/05/89 15.8 16.2 07/11/89 9.8 08/08/89 2.8 09/12/39 5.0 5.0 5.0 10/31/89 6.4 7.2 08/08/89 1.8 2.5 12.1 09/12/89 2.1 2.2 2.6 01/17/89 15.1 16.9 08/24/89 6.0 6.3 6.8 08/24/89 4.1 4.8 4.8 10/31/89 3.8 3.8 01/17/89 11.2 11.2 11.2 02/07/89 10.0 10.0 10.1 02/28/89 15.0 15.1 15.8 03/14/89 16.0 16.0 16.0 04/11/89 15.7 15.8 15.7 05/02/89 17.1 17.0 17.1 05/31/89 21.5 21.2 21.2 21.1 06/27/89 17.3 17.3 17.5 17.5 07/11/89 3.0 3.0 3.0 08/08/89 1.0 1.0 1.0 08/24/39 2.5 3.3 3.5 E230 12/05/89 15.8 16.2 E232 E232 E232 E232 E234 E234 E235 E235 E238 E238 E240 08/08/89 1.0 1.0 1.0 E240 08/24/89 2.5 3.3 3.5 E240 09/12/89 1.5 1.6 1.50 E240 10/31/89 2.2 2.2 E240 11/20/89 8.0 8.3 8.7 E240 12/05/89 10.8 11.0 E250 01/17/89 8.6 8.9 8.9 E250 02/07/89 7.2 7.5 E250 02/28/89 11.9 12.0 12.0 E250 03/14/89 12.2 12.2 12.5 12.4 E250 04/11/89 13.2 13.1 13.1 04/11/89 13.2 13.1 13.1 05/02/89 15.0 15.0 15.1 E250 05/31/89 20.1 20.0 20.0 20.0

 E250
 05/31/89
 20.1
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Myakka River Basin Project Estuary Site Profile Salinity In Situ Results Through December, 1989

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Station Date Salinity, \text{o/oo} at 0.5 meter depths from the surface 0.5 1.0 1.5 2.0 2.5 3.0 3.5
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```
02/28/89 9.1 9.0 9.1 9.2
E260
       03/14/89 8.0 8.2 8.2 3.2
E260
       04/11/89 10.1 10.3 10.6
E260
E260
       05/02/89 11.7 11.8 12.1 12.1
       05/31/89 18.1 18.1 18.1 18.1 18.1
E260
E260
       06/27/89 14.9 14.9 14.9 14.9
E260
       07/11/89 0.3 0.7 0.8
E260
       08/08/89 0.1 0.1 0.1
E260
       08/24/89 0.2 0.2 0.2 0.2
E260
       09/12/89 0.45 0.4 0.50 0.40
       10/31/89 0.1 0.1 0.1
E260
E260
       11/20/89 2.0 2.0 2.0
       12/05/89 2.8 2.9 2.9
E260
       02/07/89 2.5 2.5 2.5
E264
       01/17/89 2.5 2.5
E265
       02/28/89 7.5 7.5 7.5
E265
       03/14/89 5.0 5.0 5.1
E265
       11/20/89 0.9 0.9 0.9
E265
       12/05/89 1.0 1.0
E265
       02/07/89 1.1 1.2 1.5 1.5 1.5 1.5 1.5
E268
       01/17/89 0.6 0.7 0.8
E270
       02/07/89 0.5 0.5 0.5 0.5
E270
E270
       02/28/89 5.1 5.1 5.5 5.5 5.5
       03/14/89 3.0 3.2 3.2
E270
E270
       04/11/89 6.1 6.3 6.4 6.4
E270
       05/02/89 5.3 6.3 6.4 6.6
       05/31/89 15.1 15.2 15.5 15.5 15.6
E270
       06/27/89 14.1 14.1 14.2 14.2 14.2
E270
E270
       07/11/89 0.0 0.0 0.0 0.0
E270
       08/08/89 0.1 0.1 0.1
       08/24/89 0.0 0.0 0.0 0.0
E270
E270
       09/12/89 0.2 0.2 0.2 0.2 0.2
       10/31/89 0.1 0.1 0.1
E270
E270
       11/20/89 0.4 0.4 0.4 0.4
E270
       12/05/89 0.4 0.4 0.4 0.4
E274
       04/11/89 4.4 4.9 4.9 4.9
E275
       02/28/89 2.5 2.5 2.5
E275
       03/14/89 1.3 1.4 1.5 1.5 1.5 1.5
E275
       05/02/89 3.1 3.2 3.2 3.2
E276
       04/11/89 2.1 2.1 2.3 2.3 2.2
E280
       01/17/89 0.0 0.0 0.0 0.0 0.0 0.0
E280
       02/07/89 0.0 0.0 0.0 0.0 0.0 0.0
       02/28/89 0.1 0.1 0.2 0.5 0.5 0.5
E280
       03/14/89 0.1 0.1 0.1 0.1 0.1 0.1 0.1
E280
       04/11/89 0.9 0.9 0.9 1.0 1.0 1.0 1.0
```

Myakka River Basin Project Estuary Site Profile Salinity In Situ Results Through December, 1989

Station Date Salinity,

0/00

at 0.5 meter depths from the surface - 0.5 1.0 1.5 2.0 2.5 3.0 3.5

05/02/89 1.1 1.1 1.2 1.2 1.2 1.2 E280 05/31/89 8.8 8.9 8.9 9.0 9.0 9.0 9.0 06/27/89 11.0 11.1 11.1 11.1 11.1 E280 07/11/89. 0.0 0.0 0.0 0.0 08/08/89 0.1 0.1 0.1 0.1 0.1 E280 08/24/89 0.0 0.0 0.0 0.0 0.0 0.0 0.0 E280 09/12/89 0.1 0.1 0.1 0.1 0.1 0.1 E280 10/31/89 0.1 0.1 0.1 0.1 0.1 E280 11/20/89 0.1 0.1 0.1 0.1 0.1 0.1 E280 £280 12/05/89 0.1 0.1 0.1 0.1 0.1 0.1 E290 05/02/89 0.9 0.9 0.9 0.9 05/31/89 4.9 4.9 5.0 5.0 06/27/89 7.5 7.8 7.9 05/31/89 2.0 2.0 2.0 2.0 E290 E290 E300 06/27/89 4.7 4.8 4.8

Station	Cont.	Date	Solids Total Susp. (mg/1)	NH4-N	Diss. NO2 + NO3-N (mg/1)	Part. -P (mg/1)	Turb. NTU	Diss. PO4-P (mg/l)	Diss. OrgC (mg/l)	- C	Part. -N (mg/1)
E210 E210 E210	89-0186	01/17/89 01/17/89 02/07/89	3.2 3.3 7.6	0.005 <0.005 0.024	0.008 <0.005 0.009	0.003 0.003 0.036	1.1 0.3 4.3	0.123 0.121 0.072	5.7	0.2648 0.1740 0.9640	
E210	89-0093	02/07/89	6.3	0.017	0.006	0.033	2.8	0.073	6.3	0.8684	0.0892
E210 E210	89-0129	02/28/89 02/28/89	9.5 10.0	<0.005 0.011	0.008 0.009	0.017 0.016	2.6 2.3	0.065 0.067	5.7	0.6536 0.5888	0.0488
E210 E210		03/14/89 03/14/89	5.3 3.6		<0.005 <0.005	0.010 0.011	1.4	0.064 0.065		0.3964 0.4200	
E210	89-0327	04/11/89	7.4	0.011	0.010	0.024	2.8	0.080	4.5	0.5284	0.0708
E210 E210		04/11/89 05/02/89	6.5 14.5	0.007	<0.010	0.025 0.057	2.7 5.2	0.081		0.6576 1.4064	
E210	89-0364	05/02/89	12.6	<0.005	<0.005	0.058	5.8	0.077	5.1	1.2452	0.1692
E210 E210		05/31/89 05/31/89	11.7 13.3		<0.005 <0.005	0.008	5.2 4.3	0.081		0.9072 0.9212	
E210	89-0566	06/27/89	7.2	<0.005	<0.005	0.013	1.5	0.084	5.1	0.3408	0.0844
E210 E210		06/27/89 07/11/89	7.9 5.3		<0.005 <0.005	0.016 0.015	1.4 1.7	0.086 0.170		0.3344	0.0804
E210	89-0601	07/11/89	7.2	<0.005	<0.005	0.013	1.9	0.170	6.5	0.5656	
E210 E210		08/08/89 08/08/89	7.6 6.6		<0.005 <0.005	0.031	4.1 4.0	0.196 0.192	11.2 11.1		•
E210	89-1710	08/08/89	4.6	0.005	<0.005	0.017	2.0	0.159	7.7		
E210 E220		08/08/89 01/17/89	0.7 3.4		<0.005 <0.005	0.016	2.1 1.1	0.161 0.136	7.1 8.9	0.5172	0.0516
E220	89-0187	01/17/89	5.3	<0.005	<0.005	0.010	1.8	0.135	8.2	0.5460	0.0520
E220 E220		02/07/89 02/07/89	4.5 3.6	0.021	0.007	0.013	1.2 1.5	0.089			0.0468
E220	89-0225	02/28/39	8.3	0.005	0.007	0.013	2.3	0.083	6.0	1.1460	0.0792
E220 E220		02/28/89 03/14/89	7.1 16.3	<0.005 <0.005	0.007	0.013	2.7	0.082		0.6392	0.0512
E220	89-0294	03/14/89	16.0	<0.005	<0.005	0.070	7.4	0.071	4.4	1.4576	0.1584
E220 E220		04/11/89 04/11/89	33.6 30.8	0.025 0.021	0.010 0.010	0.123 0.125	14.2 12.3	0.103 0.105			0.2584
E220	89-0365	05/02/89	6.9	0.034	<0.005	0.022	2.1	0.099	-	0.5352	
E220 E220		05/02/89 05/31/89	5.7 25.6		<0.005 <0.005	0.024 0.008	2.3 9.7			0.5132 2.6208	
E220		05/31/89	25.9	0.010	<0.005	0.008	10.4	0.080	6.5	2.5105	0.3105
E220 E220		06/27/89 06/27/89	9.6 11.2		<0.005 <0.005	0.044 0.043	3.7 3.5	0.110 0.110		0.7308	0.1828
E220	89-0602	07/11/89	9.6	0.005	<0.005	0.041	4.7	0.160	8.6	1.1116	8881.0
E220 E220		07/11/89 08/08/89	10.1 7.1	<0.005	<0.005 0.016	0.044 0.034	4.4 3.3	0.159 0.276	9.7 14.5	1.2500	0.1692
E220	89-1713	08/08/89	5.8	0.007	0.017	0.034 0.011	3.7	0.276	14.1		A A710
E230 E230	89-0188	01/17/89 01/17/89	4.4 . 3.8		<0.005 <0.005	0.010	2.1 1.8	0.145 0.138			0.0712 0.0660
E230 E230		02/07/89 02/07/89	3.9 3.2	0.020	0.009	0.012	1.3	0.101			0.0444
E230		02/07/89	5.6	0.037		0.010	1.0	0.097			0.0524

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Station	Cont.	Date	Solids Total Susp. (mg/1)	NH4-N		'Part. -P {mg/1}	UTN	Diss. PO4-P (mg/1)	Diss. OrgC (mg/1)	Part. -0 (mg/1)	Part. -N (mg/1)
		00.100.400				0.010		2.007	0.0		A AFCO
E230		02/28/89			0.008		2.2				0.0568
E230		03/14/89				0.013	1.9				0.0496
E230		03/14/89			<0.005		1.8				0.0432
E230		04/11/89 04/11/89		0.018				- 0.119		1.1348	
E230		05/02/89		0.024	<0.010		4.3	0.116 0.109		1.1340	
E230											
E230		05/02/89			<0.005		4.1				0.1432
E230		05/31/89			<0.005		8.0			0.9516	
E230 .		05/31/89			<0.005		7.2				0.4472
E230		06/27/89			<0.005			0.117			0.2336
E230		06/27/89			<0.005						0.3032
E230		07/11/89			<0.005		3.6	0.189			0.1444
		07/11/89			<0.005		3.5			0.9895	0.1132
E230		08/08/89		0.099			3.3				
E230		08/08/89		0.076		0.022	3.0				
E230		08/08/89		0,078			2.9				
E230		08/08/89		0.081			2.9				
E232		07/11/89		0.012	<0.005		4.0			1.4064	0.1524
E232		07/11/89		0.010	<0.005		3.9			1.7084	0.2092
E232		08/08/89	3.2	0.113			3.0		22.6		
E232	89-1723	08/08/89	2.6	0.090	0.076	0.020	3.0				
234	89-1724	08/08/89	2.6	0.086	0.081	0.019	2.7	0.363	21.7		
234	89-1725	08/08/89	2.4	0.081	0.081	0.019	3.0	0.364	22.8		
235	89-0054	01/17/89	3.2	<0.005	<0.005	0.010	1.7	0.145	9.3	0.4520	0.0472
E235	89-0190	01/17/89		<0.005	<0.005	0.009	1.3	0.140	9.8	0.3588	0.0312
E240	89-0053	01/17/89		0.023	0.013	0.010	1.4	0.154	11.9	0.3232	0.0300
E240	89-0189	01/17/89	2.6	0.024	0.013	0.009	1.2	0.150	11.7	0.3864	0.0400
E240	89-0098	02/07/89	4.7	0.022	0.012	0.020	3.1	0.113	12.9	0.8548	0.0988
E240	89-0099	02/07/89	4.5	0.045	0.016	0.020	-3.0	0.113	12.7	0.7844	0.0760
E240	89-0229	02/28/89	4.0	0.007	0.007	0.009	1.2	0.114	10.4	0.4540	0.0540
E240	89-0230	02/28/89	3.7	0.009	0.007	0.009	1.2	0.114	9.7	0.4708	0.0520
E240	89-0297	03/14/89	3.9	<0.005	<0.005	0.009	1.6	0.102	7.5	0.4268	0.0408
E240	89-0298	03/14/89	4.4	<0.005	<0.005	0.010	1.4	0.101	3.4	0.4488	0.0452
E240		04/11/89		0.014			3.4				0.1160
E240		04/11/89		0.014	0.005		- 2.9				0.0620
E240		05/02/89			< 0.005			0.126			0.1492
E240		05/02/89			<0.005			0.125			0.1292
E240		05/31/89		0.019				0.177			0.6855
E240		05/31/89			<0.005		9:0				0.5923
		06/27/89			<0.005			0.172			0.2892
E240		06/27/89			<0.005			0.172			0.2716
		07/11/89		0.036		0.062	5.2				0.2228
E240		07/11/89		0.030			5.2				0.2180
		08/08/89		0.086				0.398			
E240	U U	20120103									
E240 E240	89-1719	08/08/80	3.8	0.091	0.077	-0.023	2.1X	()()	1.2.1		
E240		08/08/89		0.091 <0.005		0.023	2.8 3.6			.1.1719	0.132R
	89-0055	08/08/89 01/17/89 01/17/89	6.6	0.091 <0.005 0.005	0.010		3.6	0.398 0.159 0.154	12.5		0.1328 0.0916

Station	Cont.	Date	Solids Total Susp. (mg/1)		Diss. NO2 + NO3-N (mg/1)	Part. -P (mg/1)	Turb. NTU	Diss. PO4-P (mg/1)	Diss. OrgC (mg/1)	-0	Part. -N (mg/1)
E250 E250 E250 E250 E250 E250 E250 E250	89-0101 89-0231 89-0232 89-0299 89-0300 89-0335 89-0371 89-0372 89-0494 89-0495 89-0572 89-0573 89-0610 89-0611	02/07/89 02/07/89 02/28/89 02/28/89 03/14/89 03/14/89 04/11/89 05/02/89 05/02/89 05/31/89 05/31/89 06/27/89 07/11/89 07/11/89	5.1 4.4 2.9 2.7 3.1 3.6 6.4 5.3 9.3 8.3 15.1 16.6 10.1 17.8 6.8	<0.005 0.011 0.020 <0.005 <0.005 0.024 0.020 <0.005 <0.005 0.111 0.113	0.008 0.009 0.009 0.011 <0.005 <0.005 0.010 <0.005 <0.005 <0.005 <0.005 <0.005 0.024 0.025	0.018 0.018 0.007 0.007 0.010 0.011 0.023 0.019 0.035 0.035 0.019 0.045 0.044 0.044 0.039	3.8 3.1 1.2 1.3 1.9 2.1 3.0 2.8 4.0 7.8 7.0 4.3 3.8 4.0 3.5	0.130 0.129 0.122 0.124 0.107 0.108 0.141 0.142 0.123 0.125 0.185 0.185 0.186 0.560 0.552	15.0 11.1 10.7 11.0 10.9 8.8 8.7 10.7 10.2 9.6 10.2 9.7 23.6 21.8	0.9796 0.8944 0.2640 0.3312 0.5512 0.5368 0.5588 1.3316 1.2668 1.3793 1.2956 1.1024 0.9024 1.3548 1.2312	0.9740 0.0512 0.0284 0.0504 0.0520 0.0620 0.0612 0.1560 0.1476 0.5267 0.5200 0.2864 0.2384 0.1620
E250 E250 E255 E260 E260 E260 E260 E260 E260 E260 E260	89-1721 89-0618 89-0619 89-0192 89-0106 89-0107 89-0233 89-0234 89-0302 89-0302 89-0337 89-0338 89-0373	08/08/89 08/08/89 07/11/89 07/11/89 01/17/89 02/07/89 02/07/89 02/28/89 02/28/89 03/14/89 04/11/89 04/11/89	3.4 3.1 5.7 5.6 6.4 5.6 1 2.1 2.0 4.2 5.4 7.5	0.005 0.023 0.031 0.020 0.013 <0.005 <0.005 0.009 0.011 <0.005		0.044 0.035 0.036 0.030 0.031 0.008 0.009 0.013 0.013 0.023 0.019 0.033	2.9 3.1 3.9	0.127 0.128 0.146 0.147 0.140	25.0 16.4 16.7 13.3 19.4 12.1 12.0 9.8 11.9 12.3 9.2	1.3216 1.6052 1.6780 1.8048 1.2424 1.2112 0.5476 0.5208 0.5860 0.6004 0.8863 0.7528 1.4012	0.2060 0.1968 0.1892 0.1292 0.1120 0.0488 0.0468 0.0524 0.0548 0.0908 0.0812 0.1628
E260 E260 E260 E260 E260 E260 E260 E260	39-0496 89-0497 89-0574 89-0575 89-0612 89-0613 89-1726 89-0108 89-0109 89-0195 39-0241 89-0242	05/02/89 05/31/89 05/31/89 06/27/89 06/27/89 07/11/89 07/11/89 08/08/89 02/07/89 01/17/89 01/17/89 02/28/89 02/28/89	8.5 12.2 9.9 6.7 5.6 5.1 4.5 3.6 2.0 6.9 7.1 8.9 8.8 4.5 3.9	0.015 0.024 <0.005 <0.005 0.075 0.073 0.083 0.070 0.049 0.027 <0.005 <0.005 0.014 0.007	<pre><0.005 0.021 0.021 0.063 0.063 0.008 0.009 <0.005</pre>	0.040 0.017 0.031 0.038 0.040 0.040 0.015 0.014 0.030 0.042 0.042 0.012 0.015 0.015	4.4 6.0 5.7 3.0 3.7 2.1 2.0 4.3 4.9 5.5 2.7 2.6	0.138 0.171 0.173 0.189 0.195 0.548 0.552 0.419 0.418 0.191 0.189 0.252 0.244 0.164 0.163 0.155	9.3 8.6 9.7 8.6 24.8 27.2 25.5 23.9 20.0 19.1 18.2 18.4 13.6 13.5	1.5176 1.5276 1.4028 0.7380 0.8104 1.4944 1.5132 1.5036 1.5312 2.0500 2.2336 0.9228 0.8712 0.6956	0.5768 0.5384 0.2260 0.2100 0.1908 0.1784 0.1328 0.1432 0.2212 0.2180 0.0804 0.0812

	Station	Cont.	Date	Solids Total Susp. (mg/1)	Diss. NH4-N (mg/1)	Diss. NO2 + NO3-N (mg/l)	Part. -P (mg/1)-	Turb. NTU	Diss. PO4-P (mg/1)	Diss. OrgC (mg/1)	PartC (mg/1)	-N
	E265		03/14/89	3.8		<0.005	0.016	2.7			0.6536	
	E268		02/07/89		0.065	0.007	0.030	4.1	0.215		1.1932	
	E268		02/07/89		0.049		0.031	4.2	0.212		1.4388	
■.	E270		01/17/89			<0.005	0:032	4.4	0.289		1.6640	
	E270		01/17/89	7.3		<0.005	0.036	5.1			2.0188	
	E270 E270		02/07/89 02/07/89	6.0		<0.008	0.033 0.033	4.3 4.2	0.245 0.245		1.4716	
	E270		02/01/09	3.3	0.013	0.003	0.033	2.6	0.194		0.7736	
	E270		02/28/89	3.2	0.013	0.007	0.013	2.7	0.195		0.6656	
	E270		03/14/89	4.8		<0.005	0.022	3.1	0.169		0.7704	
	E270		03/14/89	4.6		<0.005	0.022	3.2	0.169		0.9056	
	E270		04/11/89	5.1	0.012	0.007	0.021	3.6	0.175		1:0096	
	E270		04/11/89	4.6	0.012	0.007	0.022	3.4	0.173		0.8740	
	E270	89-0375	05/02/89	9.0	<0.005	<0.005	0.031	3.3	0.154	11.4	1.3776	0.1476
-	E270	89-0376	05/02/89	6.9	<0.005	<0.005	0.031	3.4	0.151	11.7	1.3348	0.1436
	E270		05/31/89	8.7		<0.005	0.056	4.5	0.170		1.5316	
	E270		05/31/89	7.4		<0.005	0.017	4.1	0.166		1.5028	
	E270		06/27/89	6.9		<0.005	0.029	2.6	0.179		0.6628	
ė –	E270		06/27/89	6.4		<0.005	0.027	2.7	0.180		0.6684	
	E270		07/11/89	5.5	0.089	0.020	0.038	2.9	0.552		1.1532	
	E270		07/11/89	5.9	0.089		0.037	2.9	0.556		1.3432	0,1568
_	E270 E270		08/08/89 08/08/89	1.5	0.068	0.061 0.061	0.014 0.016	2.0 1.9	0.424 0.426	24.4 22.8		
	E274		04/11/89	6.2	0.013	0.009	0.026	3.9	0.177		1.3516	0.1068
	E274		04/11/89	5.3	0.012	0.007	0.026	3.4	0.175		1.0500	
	E275		02/28/89	3.3	0.015	0.007	0.017	2.8	0.220		0.9000	
	E275		02/28/89	3.6	0:013	0.006	0.019	2.8	0.222		0.9656	
	.E275	89-0307	03/14/89	4.6	<0.005	<0.005	0.028	3.2	0.177		0.9336	
	E275		03/14/89	5.5		<0.005	0.028	3.5	0.178		0.9996	
	E275		05/02/89	8.9		<0.005	0.032	3.7	0.161		1.5572	
	E275		05/02/89	7.5		<0.005	0.032	3.4	0.161		1.5644	
	E276		04/11/89	4.8	0.019	0.007	0.027	3.2	0.203		1.1544	
	E276		04/11/89			-0.008	0.025		0.202		1.1752	
	E280 E280		01/17/89. 01/17/89		<0.005		0.027	3.1	0.322		1.1224	
	E280		02/07/89	7.7	<0.005 0.019		0.024 0.034	2.8 3.8	0.321		1.1268 1.5852	
	E280		02/07/89	8.3		0.009	0.037	3.9	0.281		1.6472	
	E280		02/28/89	3.5	0.012	0.007	0.022	2.4	0.269		0.9860	
	E280		02/28/89	3.3	0.022	0.007		2.5	0.269		0.8240	
	E280 ·		03/14/89	5.8		<0.005	0.038	3.1	0.180		1.3448	
	E280		03/14/89		<0.005		0.034	2.9	0.180		1.2760	
	E280	89-0341	04/11/89	5.2	0.020	0.010	0.030	3.6	0.228	16.2	1.0756	0.1032
_	E280		04/11/89	5.3	0.017	0.005	0.025	.3.7	0.228		0.9704	
	E280		05/02/89	9.5		<0.005	0.037	4.5	0.164		1.6320	
	E280		05/02/89	7.8		<0.005	0.042	4.2			2.1108	
_	E280		05/31/89	7.4		<0.005	0.018	4.0			1.4836	
	E280	99-050I	05/31/89	8.2	0.023	<0.005	0.018	4.1	0.190	10.2	1.5588	n.0000

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Station	Cont.	Date	Solids Total	NH4-N	Diss. NO2 +	Part. -P	Turb. NTU	Diss. PO4-P	Diss. OrgC	Part.	Part. -N
			Susp. (mg/l)	(mg/1)	NO3-N (mg/l)	(mg/1)		(mg/l)	(mg/1)	(mg/1)	(mg/1)
E280	89-0578	06/27/89	6.8	<0.005	<0.005	0.040	3.8	0.178	11.5	1.1724	0.2976
E280	89-0579	06/27/89	7.6	<0.005	<0.005	0.046	4.0	0.179	11.7	1.2476	0.3416
E280	89-0616	07/11/89	7.1	0.091	0.015	0.056	3.3	0.564	25.9	1.6592	0.1888
E280	89-0617	07/11/89	7.5	0.096	0.015	0.048	3.5	0.556	24.9	1.6180	0.1844
E280	89-1730	08/08/89	3.6	0.074	0.057	0.022	2.4	0.420	18.6		
E280	89-1731	08/08/89	3.4	0.071	0.058	0.020	2.2	0.420	24.9		
E290	89-0379	05/02/89	7.4	<0.005	<0.005	0.037	4.4	0.163	15.2	1.9108	0.2136
E290	89-0380	05/02/89	8.3	0.014	<0.005	0.035	4.2	0.162	14.6	1.7976	0.1968
E290	89-0502	05/31/89	6.5	0.014	<0.005	0.020	4.0	0.200	13.2	0.8932	0.3356
E290	89-0503	05/31/89	5.3	0.011	<0.005	0.020	3.4	0.202	13.7	0.8140	0.3000
E290	89-0580	06/27/89	7.7	<0.005	<0.005	0.050	5.5	0.181	11.9	1.4776	0.3980
E290	89-0581	06/27/89	7.7	<0.005	<0.005	0.044	4.9	0.181	11.3	1.1632	0.3272
E300	89-0504	05/31/89	4.2	0.014	<0.005	0.023	2.9	0.227	14.8	0.6892	0.2524
E300	89-0505	05/31/89	4.3	0.010	<0.005	0.023	3.1	0.226	14.8	0.6324	0.2352
E300	89-0582	06/27/89	8.3	<0.005	<0.005	0.062	5.2	0.194	13.0	1.3188	0.3604
E300	89-0583	06/27/89	7.2	<0.005	<0.005	0.047	5.3	0.194	14.5	1.2816	0.3632

ATTACHMENTS

ATTACHMENT 1

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ATTACHMENT 2

Description and Map of Sampling Stations

ATTACHMENT 2

MYAKKA RIVER FRESH H₂0 SAMPLING POINTS

Station Designation	Station Description
B110	Myakka City at bridge on State Rd 70 Sample at USGS Continuous Record Gaging Station #02298608 27°20'36" 82°09'25" Manatee Co. Section 13 Township 36S Range 21E
B120	Howard Creek on Hi Hat Ranch approximately 4 mi. south of State Rd. 780 Sample at USGS Continuous Record Gaging Station #02298760 27°17'17" 82°20'25" Sarasota Co. Section 6 Township 37S Range 20E
B130	Myakka River near Clay Gully inflow. Sample from bridge on Clay Gully Road. North of Myakka River State Park. Sarasota Co. Sample at USGS Continuous Record Gaging Station installed 4/89. Staff gage installed 1/89.
B140	Myakka River in the Myakka River State Park. 1/2 mile north of the State Road 72 entrance to the State Park on the west bank of the river. Sample at USGS Continuous Record Gaging Station #02298830 27°14'25" 82°18'50" Sarasota Co. Section 21 Township 37S Range 20E
B150	Big Slough Canal at bridge on State Road 72 near Myakka River State Park Sample at USGS Continuous Record Gaging Station #02299410 27°11'35" 82°08'40" Sarasota Co. Section 6 Township 38S Range 22E
B160	Myakka River on Chuck Down's property, 500ft downstream from concrete dam. Sample at USGS Continuous Record Gaging Station #02298880 27°11'07" 82°21'21" Sarasota Co. Section 12 Township 38S Range 19E
B170	Big Slough in North Port, 25 yards upstream from I-75 bridge. Sarasota Co. Section 21 Township 39S Range 21E Staff gage installed 1/89; Continous Record Gaging Station installed 4/89.

B180

Deer Prairie Slough at bridge on I-75. Sample will be taken in the channel on the north side of the bridge.

Correlate to USGS Continous Record Gaging Station #02299160 Sarasota Co.

Section 21 Township 39S Range 21E

ATTACHMENT 2 (Cont'd)

MYAKKA RIVER ESTUARINE STATIONS

Station Designation ¹	Station Description
E210	In Charlotte Harbor; 1.5 nautical miles SSE (compass heading 140) of number 9 square green channel marker at the Sarasota-Charlotte county line; sample 25 yards west of the number 8 triangular red channel marker. Longitude W82:09:58; Latitude N26:54:51. Loran Coordinates 14165.4 44080.0
E220	In the Myakka River; 100 yards west of the El Jobean Bridge (Highway 771) on the south side of the channel; between the second and third canals in the development on the south bank of the river; 75 yards south along the bisected railroad bridge. Longitude W82:13:02 Latitude N26:57:22. Loran Coordinates 14165.0 44122.1
E230	In Myakka Bay; 50 yards north of hexagonal channel marker B; line up between the canal on the west bank and the large dead tree on the east bank. Longitude W82:14:45 Latitude N26:59:00. Loran Coordinates 14166.3 44143.2
E240	In the Myakka River; 25 yards east of the dock with a red bench; this dock is the first of three docks south of statue (Myakka River God) on the south end of the Tarpon Point development. Longitude W82:16:39 Latitude N27:00:83. Loran Coordinates 14166.8 44178.7
E250	In the Myakka River; north of Big Slough mouth; on the west side of the island off a trailer park; 200 yards south of the number 3 green square channel marker; line up between the 2 headless palms on the island to the east and just south of an area of low mangroves on the west bank. Longitude W82:16:88 Latitude N27:01:98. Loran Coordinates 14168.5 44178.8
E260	On the Myakka River; north of the highway 41 bridge and Becky's Bait Bucket; 50 yards north of the mouth of Deer Prairie Creek 25 feet from the tip of the island with 3 palm trees; sample in midchannel. Longitude W82:17:77 Latitude N27:03:03.

Loran Coordinates 14169.2 44191.8

E270

On the Myakka River; upstream of the last mangrove; after a bend with a single Australian pine; sample in midstream at the first palm which hangs out over the water; channel markers number 8 red triangular and number 9 green square are 500 yards upstream. Longitude W82:18:86 Latitude N27:03:94. Loran Coordinates 14169.1 44205.7

E280

On the Myakka River; three left bends in the river followed by three right bends upstream of Rambler's Rest Campground; the area is known as Big Bend and is characterized by a high white sand bank on the east bank of the river. Longitude W82:17:63 Latitude N27:02:52. Loran Coordinates 14170.1 44219.4

1. 8 "fixed" stations listed above plus 2 "floating" stations

